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ELEVENTH ANNUAL REPORT

OF THE

STATE BOARD OF HEALTH,

OF THE

STATE OF RHODE ISLAND,

FOR THE YEAR ENDING DECEMBER 31, 1888.

AND INCLUDING THE REPORT UPON THE REGISTRATION OF

BIRTHS, MARRIAGES AND DEATHS IN 1887.

PROVIDENCE:
E. L. FREEMAN & SON, PRINTERS TO THE STATE.
1889.

MEMBERS

OF THE

RHODE ISLAND STATE BOARD OF HEALTH.

DECEMBER 31, 1888.

	Post Office Address.	
HENRY E. TURNER, M. D, *Chairman*	NEWPORT	NEWPORT COUNTY.
SAMUEL M. GRAY, C. E	PROVIDENCE	PROVIDENCE CO.
HENRY W. ROSE, M. D	WESTERLY	WASHINGTON CO.
ALBERT G. SPRAGUE, M. D	RIVER POINT	KENT COUNTY.
HENRY S. SWAN, M. D	BRISTOL	BRISTOL COUNTY.
PAUL S. REDFIELD, M. D	PROVIDENCE	PROVIDENCE CO.
CHARLES H. FISHER, M. D., *ex-officio and Secretary*	PROVIDENCE	PROVIDENCE CO.

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GENERAL REPORT.

To the Honorable the General Assembly of Rhode Island:

The Eleventh Annual Report of the State Board of Health is herewith respectfully presented, in compliance with Section 9, Chapter 83, of the Public Statutes.

The report is for the year ending December 31st, 1888, and presents an outline of the general proceedings of the board and the work performed under its supervision, which is mainly included in the Report of the secretary, and may be found in the following pages and in the pages of the Monthly Bulletin.

PERSONNEL OF THE BOARD.

Dr. Thomas H. Shipman, a member of the board from Bristol County, since July, 1880, having removed to Providence, and thereby ceasing to represent Bristol County, tendered his resignation early in the year, and Dr. Henry S. Swan, of Bristol, was appointed to fill the vacancy during the unexpired term of Dr. Shipman, and the appointment was approved by the Senate at the January session of 1888.

The term of membership of Samuel M. Gray, C. E., of Providence County, having expired during the year, he was reappointed by the Governor at the May Session of the General Assembly and confirmed by the Senate.

Otherwise than by the resignation of Dr. Shipman, the members of the board remain the same as at the time of the submission of the last previous report.

WORK OF THE BOARD.

With the exception of occasional joint visitation of particular localities for special examination, or the inspection of the present condition, or proposed changes, or new construction of methods of sewerage, draining and ventilation of public institutions, the active work, of which the board has had supervision or cognizance, has been mainly performed by the secretary as the executive officer.

SANITARY.

At the meetings of the board (reports of which were given at the time in the public press) the various questions in relation to public and private sanitation have been considered and acted upon as far as authority and means at command would permit.

The questions have in part related to nuisances in the towns, endangering the public health by pollution of the supplies of water for domestic use and especially of drinking water in wells and streams; by decomposition upon the surface of the ground of large quantities of human and animal excreta, garbage, swill and offal of various kinds, by lack of drainage of large tenement houses, overflowing of cesspools, uncleaned privies and stagnant sink-drains in proximity to work and sleeping rooms. Practical attention has been given by the secretary to the abatement of such nuisances and dangerous conditions, through the health officers or by the various town or corporation authorities.

The secretary has also, by regular and continued correspondence, endeavored to keep advised of outbreaks of contagious and infectious diseases and the large or unusual prevalence of any serious disease within the limits of the State, and to render in every instance all assistance possible in the effort to restrict and suppress such diseases.

SUMMER HOTELS.

Early in the year the board framed an act for the protection of the patrons of the summer hotels and boarding houses in the State, and the same was introduced into the General Assembly early in the January session.

The act originally provided for a mandatory sanitary inspection of all such premises. The act was variously amended and became a law after its effectiveness was destroyed by making the inspection optional with the owner, agent or lessee of such premises. Obviously, only the first-class hotels, in a sanitary point of view, would ask for inspection, and the dangerous premises, if any, would still remain in their previous condition. Twenty-nine only of such premises were examined by request, according to law, and they were such as were supplied with all modern sanitary arrangements. It is the unanimous and earnest request of the board that the optional clause be eliminated from the act.

POLLUTION OF STREAMS.

A bill, prepared by the secretary and designed to secure, by gradual improvement from year to year, a greater purity of the inland waters of the State, and which had previously passed the higher branch of the General Assembly, was, by the House of Representatives, indefinitely postponed. The bill did not contemplate any arbitrary measures that would bear hardly in a pecuniary way upon manufacturers or other polluters of the streams or ponds in the State, but was designed to enable the board to co-operate with all parties, with the least possible mutual expense and by the adoption of the most efficient known methods in the accomplishment of the desired results.

MONTHLY BULLETIN.

During the year the publication of a monthly bulletin of the board was commenced, having for its purpose a monthly report of the mortality of the State during each preceding month, the causes of death and number of each cause, the sex, age and parentage of the decedents ; the prevalent diseases affecting mankind and the domestic animals ; the daily and monthly meteorological phenomena ; and also such improvements in the towns as may have a sanitary bearing upon the public health.

In addition the secretary has taken occasion to publish therein selected essays of great merit, having relation to personal and general hygiene, and also articles from his own pen, including brief notes under the head of "Sanitary Notes," and longer articles in the first six issues, entitled as follows :

Clean Up.
Save the Babies.
Disinfectants and Deodorizers.
Use and Care of Gasoline.

Sewage Disposal.
Typhoid Fever and its Prevention.
Tests for Water.
Electricity.
Scarlet Fever and its Prevention.
School Life in Winter.
Ventilation of School Rooms.

The preparation, publication and distribution of the Bulletin requires a large additional amount of labor in the office of the board.

SANITARY LITERATURE.

In addition to the pages of the Monthly Bulletin there were issued during the year several circulars in relation to the duties of health officers; the moral and legal duties and opportunities of physicians; the duties of town clerks and undertakers in relation to returns of deaths; the preparation of blanks for monthly returns, with explanations, and the distribution and collection of the same; circulars in relation to the cause and prevention of typhoid fever, and the characteristics of the disease; and in relation to scarlet fever and its prevention; all of which, and some of other years, are kept on hand for distribution to such persons, at such times and in such localities as circumstances or opportunities may seem to require.

CATTLE COMMISSION.

The amount of vigilance and labor required in the protection of the domestic animals of the State from the spread of contagious and infectious diseases among them can scarcely be appreciated by the average citizen. The attention of the secretary in the matter of the investigation of such diseases, or the examination of animals having or suspected of having such diseases, and in different sections of the State, was given on one hundred and seventy-four different days of the year. This statement of time given to the department of animal diseases, by the secretary, does not include the very large amount of time and labor required in the preparation of the report upon tuberculosis and its prevalence among the neat cattle of Rhode Island, which will be found in subsequent pages of this report. A statement in detail in relation to glanders, and other animal diseases, will also be found in subsequent pages.

REPORT OF THE SECRETARY.

HEALTH OF THE STATE.

Very little of an unusual character, in relation to the prevalence of disease, occurred during the year 1888.

The diseases of common occurrence, caused by imprudence in eating, sudden changes in the temperature and humidity of the atmosphere, and various indulgences, were as numerous as in the average of years.

Neither pneumonia nor bronchitis were prevalent in unusual numbers, except in a few localities.

PREVALENCE OF ZYMOTIC DISEASES, 1888.

CHOLERA INFANTUM.

There was no very unusual prevalence of cholera infantum in any town in the State during 1888, and a large number of cases was reported only from Johnston, Lincoln, Pawtucket, Woonsocket and South Kingstown.

CROUP AND DIPHTHERIA.

These diseases occurred in less than the usual numbers during 1888. In no localities was there an unusual or even large prevalence reported.

DIARRHŒA AND DYSENTERY.

The diarrhœal diseases, in all the different forms, were less prevalent during the year than usual, the reports from all parts of the State showing on the contrary an unusual exemption.

MALARIAL DISEASES.

The diseases ascribed to a special malarial influence seem to have become acclimatized and permanently residentiary in a considerable number of towns, especially those bordering upon or lying in the valleys of the Blackstone, Mosshassuck, Woonasquatucket and Pawtuxet rivers, and contributory streams.

The number of persons affected during 1888 were not larger, however, than in previous years. There were a larger number, however, who succumbed to repeated attacks, or from some inter-current disease, induced therefrom or thereby.

TYPHOID FEVER.

An epidemic of typhoid fever, of considerable dimensions, occurred in the town of Bristol during the month of July and continued until the last of September. The largest number sick were during the six weeks from July 25th to August 31st. About two per cent. of the population was attacked, and the fatality was about six per cent. of the whole number sick.

By authority of the Governor, the board appointed Dr. G. T. Swarts, Medical Inspector for Providence city, to make a thorough sanitary investigation of the circumstances connected with the epidemic, with the purpose of ascertaining the causes of the same.

The report of such investigation had not been made to the board at the time of this writing.

A sudden and rather large prevalence of typhoid fever also occurred in the city of Providence during the last week in November and the first two weeks in December.

In Natick, and in the villages adjoining to the west and south, an unusual number of cases occurred during the autumnal months. Otherwise in the State, the reports from the towns of North Providence, Burrillville, Johnston, Lincoln, North Smithfield and Woonsocket, showed a rather large prevalence, and in the town of Hopkinton, in the vicinity of Rockville, there was an almost epidemic prevalence from July to the first of October. No unusual occurrence elsewhere in the State.

MEASLES.

Measles prevailed in an epidemic form in one town only during 1888, namely, North Providence. Elsewhere reports showed no prevalence, or in small numbers only.

SCARLATINA.

Scarlatina was present in moderately epidemic numbers during some parts of the year, in Coventry, East Greenwich, North Providence and Woonsocket.

It had a considerably large prevalence in the western half of Warwick during the first half of the year, and was epidemic in Woonsocket and North Smithfield during the earlier months of the year.

WHOOPING COUGH.

Whooping cough was epidemic in Coventry and Charlestown. It was present in considerable numbers in Providence and Johnston in the latter part of the year. It was also somewhat prevalent in some parts of Newport city and in East Greenwich late in the year.

SECRETARY'S REPORT.

HEALTH IN THE TOWNS.

1888.

COMPARATIVE PREVALENCE

OF TWELVE IMPORTANT ACUTE DISEASES IN THE TOWNS.

For the purpose of comparison, the following five Tables will present the varying phases of the prevalence of twelve acute diseases of importance, as causes of death during the five years 1884–1888.

In these tables the appearance of the most important of the common contagious diseases, with a few others not contagious, may be traced as they occurred in the different towns, with different degrees of prevalence from year to year.

The mortality from that class of diseases styled zymotic quite approximately corresponds, in a majority of instances, with the relative extent of prevalence of such diseases.

A fair estimate, therefore, of the whole number of cases of each of such diseases, occurring in the State during each of the years represented, may be made by reference to the alphabetical classification and percentage Tables of mortality in the Registration Reports for those years.

Comparative Prevalence of Twelve Important Acute Diseases during 1884.

TOWNS.	Bronchitis.	Cholera Infantum.	Croup.	Diphtheria.	Diarrhœa and Dysentery.	Fever, Typhoid.	Fever, Malarial.	Measles.	Pneumonia.	Rheumatism.	Scarlatina.	Whooping Cough.
Barrington	||	||	||	0	||	|	+	|	+	||	0	|
Bristol	||	|	|	0	|	+	|	0	|	|	|	|
Warren	||	||	|	0	||	||	||	+	+	+	0	+
Coventry	||	||	|	||	+	|	:	|	+	+	|	:
East Greenwich	||	||	|	|	||	||	|	0	||	||	||	||
West Greenwich	||	|	||	:	|	|	0	0	||	+	||	|
Warwick	+	||	+	|	|	|	||	*	||	||	:	|
Jamestown	||	|	0	0	|	|	0	0	|	|	0	|
Little Compton	|	|	0	:	|	||	0	*	|	|	0	||
Middletown	||	|	0	:	|	||	0	|	||	0	||	|
New Shoreham	|	|	0	|	|	+	0	*	|	|	0	0
Portsmouth	||	|	0	0	|	|	0	0	|	|	|	:
Tiverton	||	|	0	:	|	|	0	|	||	||	|	:
Newport City	||	|	:	:	|	||	:	|	||	||	+	+
Burrillville	|	|	|	||	||	*	0	0	+	||	+	0
Cranston	||	||	|	|	|	||	+	|	||	+	||	|

Cumberland	+	—	+	+	—	—	*	..	—	=	=	*
East Providence	=	=	—	=	—	+	=	—	+	+	=	—
Foster	—	—	..	..	—	—	..	+	=	=	0	..
Glocester	—	—	..	=	=	=	0	0	+	=	=	0
Johnston	=	+	—	—	—	=	+	—	=	=	+	—
Lincoln	=	=	—	=	=	—	+	..	—	—	=	=
North Providence	=	—	..	=	—	=	+	—	+	+	—	0
North Smithfield	=	=	—	..	=	=	—	0	=	+	—	0
Pawtucket	=	—	+	+	=	=	+	+	—	—	+	=
Scituate	=	=	—	—	—	=	+	—	+	+	+	0
Smithfield	=	=	—	—	=	=	+	0	=	+	=	..
Woonsocket	=	=	—	..	=	+	+	0	=	+	+	0
Providence City	=	+	=	=	—	—	=	=	+	+	+	=
Charlestown	=	—	..	—	+	—	—	0	—	—	..	+
Exeter	=	—	—	..	—	—	0	0	—	+	—	0
Hopkinton	=	—	..	—	=	=	—	0	—	=	—	+
North Kingstown	=	=	—	—	=	=	—	0	—	=	=	—
South Kingstown	=	=	—	..	=	=	..	0	+	+	—	0
Richmond	=	—	..	—	+	=	—	0	—	=	..	*
Westerly	=	..	—	..	=	—	=	0	+	=	*	+

☞ The signs or characters used in the above Table indicate the degrees of prevalence of the diseases named, as follows: The * indicates an epidemic prevalence: the sign + a large prevalence; the sign = a moderate prevalence; the sign — a small prevalence; the dots a *very* small prevalence; and the 0 no prevalence according to the returns.

Comparative Prevalence of Twelve Important Acute Diseases during 1885.

TOWNS.	Bronchitis.	Cholera Infantum.	Croup.	Diphtheria.	Diarrhœa and Dysentery.	Fever, Typhoid.	Fever, Malarial.	Measles.	Pneumonia.	Rheumatism.	Scarlatina.	Whooping Cough.
Barrington	=	—	—	..	—	=	+	0	=	=	..	—
Bristol	+	—	—	+	+	=	0	—	—	=	—	=
Warren	=	—	..	—	=	=	=	0	+	=	—	—
Coventry	—	..	=	+	+	..	—	*	..	+	—	+
East Greenwich	=	+	—	—	+	—	—	0	=	=	..	..
West Greenwich	—	—	—	=	+	—	..	—	..	=	..	—
Warwick	=	—	=	=	=	=	=	=	=	+	..	=
Jamestown	=	..	..	..	=	—	0	0	=	=	..	0
Little Compton	+	+	—	0	=	=	—	+	+	=	0	+
Middletown	+	—	—	=	=	—	..	0	=	=	0	0
New Shoreham	=	..	0	—	=	=	0	0	0	=	..	..
Portsmouth	=	..	—	=	=	—	..	..	=	=	..	0
Tiverton	+	=	—	..	=	=	0	+	=	—	0	=
Newport City	+	—	—	=	=	—	..	0	+	=	—	0
Burrillville	=	—	0	—	—	—	..	*	=	—	0	*
Cranston	=	—	=	=	=	=	+	—	+	=	—	..

Cumberland	=	=	=	..	—	=	+	0	—	=	..	..
East Providence	=	=	+	+	—	=	—	—	0	—	—	+
Foster	=	..	..	—	=	..	0	—	=	=	0	=
Glocester	+	0	0	0	—	=	0	—	+	=	0	*
Johnston	=	—	+	+	=	=	+	—	+	=	—	..
Lincoln	=	=	=	..	=	=	+	0	—	=	..	—
North Providence	=	—	—	=	=	=	=	—	+	+	—	..
North Smithfield	=	—	—	—	=	=	—	=	=	—	..	+
Pawtucket	+	=	—	=	—	—	+	+	=	=	+	..
Scituate	—	=	0	+	=	=	—	0	=	=	0	0
Smithfield	+	—	..	=	—	—	—	0	—	=	..	..
Woonsocket	=	=	=	=	=	=	+	—	=	—	—	*
Providence City	+	=	=	=	=	—	=	=	+	=	=	+
Charlestown	+	0	..	—	—	—	=	=	=	=	=	—
Exeter	=	—	..	..	—	—	0	0	=	—	..	..
Hopkinton	=	—	—	—	=	—	—	0	=	—	..	..
North Kingstown	=	=	—	=	=	—	—	..	—	—	..	0
South Kingstown	=	=	—	—	=	—	..	0	=	—	—	..
Richmond	=	—	—	—	=	—	—	0	=	=	..	..
Westerly	=	—	..	..	=	=	=	..	=	=	*	..

☞ The signs or characters used in the above Table indicate the degrees of prevalence of the diseases named, as follows: The * indicates an epidemic prevalence; the sign + a large prevalence; the sign = a moderate prevalence; the sign — a small prevalence; the dots a *very* small prevalence; and the 0 no prevalence, according to the returns.

Comparative Prevalence of Twelve Important Acute Diseases during 1886.

TOWNS.	Bronchitis.	Cholera Infantum.	Croup.	Diphtheria.	Diarrhœa and Dysentery.	Fever, Typhoid.	Fever, Malarial.	Measles.	Pneumonia.	Rheumatism.	Scarlatina.	Whooping Cough.
Barrington	+	—	—	—	—	—	=	—	=	=	..	—
Bristol	=	=	—	+	=	—	—	0	—	+	0	—
Warren	=	—	—	=	=	—	=	—	+	=	=	—
Coventry	+	—	=	=	=	—	+	..	=	+	—	=
East Greenwich	=	—	—	—	=	—	—	0	=	=	+	=
West Greenwich	=	—	=	=	=	..	..	—	—	+	..	=
Warwick	=	=	=	—	=	—	+	+	—	=	+	+
Jamestown	=	—	—	..	=	—	0	..	—	=	0	0
Little Compton	—	—	..	..	—	..	0	0	=	=	0	0
Middletown	=	=	—	—	—	—	0	..	—	—	0	0
New Shoreham	—	—	0	0	—	0	0	0	..	..	0	0
Portsmouth	—	—	0	—	—	—	0	0	=	=	0	0
Tiverton	..	=	0	—	..	0	0	..	=	=	0	0
Newport City	—	=	—	—	=	—	0	..	—	=	..	—
Burrillville	=	—	—	—	=	—	..	0	=	=	0	*
Cranston	+	=	—	—	+	=	+	—	+	=	—	=

Cumberland	=	—	0	—	—	..	*	0	—	=	—	—
East Providence	+	=	—	=	..	—	*	..	=	=	—	—
Foster	=	—	—	—	=	—	..	0	=	=	0	
Glocester	=	0	0	—	=	0	..	0	=	—	0	*
Johnston	+	=	=	=	+	=	+	=	+	=	=	+
Lincoln	=	=	..	+	—	..	+	0	—	=	—	—
North Providence	=	=	—	=	—	—	—	..	—	=	—	—
North Smithfield	=	=	=	=	=	—	=	..	=	=	..	..
Pawtucket	=	+	—	=	=	=	+	..	=	=	=	—
Scituate	=	=	—	..	=	=	+	*	+	=	0	*
Smithfield	=	=	—	=	—	—	—	—	=	=	0	..
Woonsocket	+	+	=	=	=	—	+	—	=	=	—	..
Providence City	+	=	=	+	=	=	=	+	+	—	—	+
Charlestown	=	..	—	—	+	..	..	0	=	+	..	—
Exeter	+	..	..	..	=	—	0	*	—	+	0	..
Hopkinton	+	—	..	..	+	—	—	+	+	+	0	..
North Kingstown	=	—	—	—	=	—	..	0	=	=	—	..
South Kingstown	=	=	..	..	+	..	..	0	=	=	+	*
Richmond	+	..	—	—	+	—	..	—	=	+	..	—
Westerly	=	—	—	..	+	—	=	0	=	+	=	+

☞ The signs or characters used in the above Table indicate the degrees of prevalence of the diseases named, as follows: The * indicates an epidemic prevalence: the sign + a large prevalence; the sign = a moderate prevalence; the sign — a small prevalence; the dots a *very* small prevalence; and the 0 no prevalence according to the returns.

Comparative Prevalence of Twelve Important Acute Diseases during 1887.

TOWNS.	Bronchitis.	Cholera Infantum.	Croup.	Diphtheria.	Diarrhœa and Dysentery.	Fever, Typhoid.	Fever, Malarial.	Measles.	Pneumonia.	Rheumatism.	Scarlatina.	Whooping Cough.
Barrington	—	=	=	+	=	—	=	—	=	=	=	0
Bristol	—	··	··	—	=	—	—	—	=	=	+	··
Warren	=	=	=	+	=	··	=	—	=	+	=	0
Coventry	—	—	—	=	—	··	—	=	—	=	*	··
East Greenwich	—	—	··	—	+	=	=	—	··	··	—	··
West Greenwich	—	··	··	··	—	··	0	—	—	=	—	··
Warwick	+	··	=	—	=	+	+	*	—	+	*	*
Jamestown	=	··	··	—	—	—	0	—	—	—	··	··
Little Compton	—	··	—	—	··	··	0	—	=	=	0	0
Middletown	—	··	··	··	—	··	0	=	—	—	··	—
New Shoreham												
Portsmouth	—	—	—	—	··	··	0	0	=	=	0	0
Tiverton	—	—	—	=	0	=	0	—	=	=	0	0
Newport City	=	—	··	—	—	—	0	+	=	=	—	=
Burrillville	—	—	—	—	—	··	··	0	—	—	0	0
Cranston	—	—	—	··	—	··	+	—	—	—	+	—

Cumberland	..	=	=	*	—	—	+	..	..	..	—	..
East Providence	—	—	—	+	=	..	=	..	+	—	+	0
Foster	..	..	—	—	—	+	—	—	*	—	—	0
Glocester	—	0	..	..	=	—	=	0	—	—	0	0
Johnston	+	=	—	=	+	—	+	+	+	+	+	—
Lincoln	—	=	=	*	..	..	+	..	..	=	..	..
North Providence	=	=	—	=	=	—	=	=	+	=	+	—
North Smithfield	+	..	—	+	—	..	..	..	=	=	+	..
Pawtucket	=	—	—	+	—	..	—	..	=	+	..	..
Scituate	—	—	..	—	=	+	+	—	—	+	..	..
Smithfield	=	—	..	—	—	..	+	—	=	=	—	0
Woonsocket	=	—	—	=	=	—	=	—	=	=	*	..
Providence City	+	=	=	+	=	—	+	*	+	=	*	=
Charlestown	—	0	=	*	=	..	..	..	—	=	0	..
Exeter	..	..	0	0	+	..	..	0	0	0	0	0
Hopkinton	=	..	=	=	=	..	..	=	=	+	—	..
North Kingstown	..	..	0	=	+	—	—	0	0	0	..	0
South Kingstown	—	—	0	..	=	—	..	*	—	—	0	0
Richmond	—	0	+	*	=	..	..	—	—	=	0	..
Westerly	+	=	=	+	+	=	=	—	=	=	=	—

☞ The signs or characters used in the above Table indicate the degrees of prevalence of the diseases named, as follows: The * indicates an epidemic prevalence; the sign + a large prevalence; the sign = a moderate prevalence; the sign — a small prevalence; the dots a *very* small prevalence; and the 0 no prevalence, according to the returns.

Comparative Prevalence of Twelve Important Acute Diseases during 1888.

TOWNS.	Bronchitis.	Cholera Infantum.	Croup.	Diphtheria.	Diarrhœa and Dysentery.	Fever, Malarial.	Fever, Typhoid.	Measles.	Pneumonia.	Rheumatism.	Scarlatina.	Whooping Cough.
Barrington	=	—	..	..	=	=	—	0	+	—	0	0
Bristol	..	..	—	..	=	0	*	0	—	=	=	0
Warren	+	—	—	—	=	—	=	0	+	=	0	0
Coventry	—	=	=	—	=	—	—	..	—	+	*	*
East Greenwich	..	—	..	—	—	—	—	0	=	+	*	+
West Greenwich	—	—	—	..	=	0	..	..	—	=	—	..
Warwick	+	=	—	..	=	—	+	..	+	=	+	—
Jamestown	=	—	..	..	—	0	—	0	=	—	..	..
Little Compton	—	0	..	—	—	0	—	—	=	=	—	—
Middletown	=	=	—	—	—	0	—	0	=	—	—	—
New Shoreham												
Portsmouth	=	=	—	—	=	0	—	0	—	—	—	—
Tiverton	0	0	—	0	—	0	=	=	=	=	=	—
Newport City	=	=	—	—	—	0	—	0	+	—	—	..
Burrillville	=	—	0	0	=	0	+	0	+	=	—	0
Cranston	+	=	—	=	=	+	=	..	—	—	=	..

Cumberland	=	=	..	=	=	+	—	—	—	—	—	—
East Providence	+	=	—	=	=	=	—	—	=	=	—	—
Foster	—	=	0	..	=	—	=	0	=	=	0	0
Glocester	=	—	0	0	=	0	=	0	+	=	0	0
Johnston	+	+	—	=	=	+	+	—	=	—	=	—
Lincoln	+	+	—	—	=	+	+	0	—	—	—	..
North Providence	+	+	—	—	=	*	=	*	—	+	*	—
North Smithfield	+	=	—	—	—	+	=	—	=	=	+	..
Pawtucket	+	+	—	=	=	=	+	..	=	=	—	—
Scituate	+	=	..	..	=	—	—	..	—	..	=	..
Smithfield	=	=	..	..	=	=	..	—	—	—	—	—
Woonsocket	+	+	..	—	=	+	+	—	=	=	*	..
Providence City	+	=	—	=	=	=	+	—	=	=	=	+
Charlestown	=	0	0	—	=	=	=	0	=	—	0	*
Exeter	+	0	0	..	=	0	—	0	=	+	0	0
Hopkinton	+	—	..	—	=	—	*	0	—	+	—	—
North Kingstown	=	..	..	—	+	—	..	0	=	—	—	0
South Kingstown	=	+	..	..	=	—	=	0	=	..	—	—
Richmond	+	=	—	—	=	—	=	0	=	+	—	—
Westerly	=	=	..	—	=	=	=	0	=	+	—	..

☞ The signs or characters used in the above Table indicate the degrees of prevalence of the diseases named, as follows: The * indicates an epidemic prevalence; the sign + a large prevalence; the sign = a moderate prevalence; the sign — a small prevalence; the dots a *very* small prevalence; and the 0 no prevalence, according to the returns.

ANNUAL REPORTS OF MEDICAL CORRESPONDENTS.

As in previous years, the plan of soliciting from the regular medical correspondents of the Board, and other physicians, a report at the commencement of each year, covering, in a general way, the whole of the preceding year, in relation to the amount of sickness of all kinds, the prevalence of particular diseases, and the sanitary conditions and movements in their respective localities, has been continued and the following circular sent therefor as usual:

CIRCULAR NO. 95.

OFFICE OF SECRETARY OF THE STATE BOARD OF HEALTH.

PPOVIDENCE, Jan. 1, 1889.

The Secretary of the State Board of Health desires to obtain from all respectable physicians in every section of the State an Annual Report covering the whole twelve months preceding the above date.

The following questions will indicate the information sought and the general plan of such report; but correspondents need not be confined to precise replies to the question presented, all the freedom being allowable of such modifications and additions as the circumstances or peculiarities of each locality may seem to warrant.

These annual reports are desired for the purpose of presenting the status of the public health and the sanitary conditions and sentiment existing in the different sections of the State, during the year 1888, in the Eleventh Annual Report of the State Board of Health.

They should be returned to the Secretary of the Board by the second week in February.

Any additional postage stamps needed to cover postage on more extended consideration of the topics suggested, or any other topic having relation to the public health, will be immediately refunded on the receipt of papers.

QUESTIONS.

1. Name of Physician.

2. Name of town and circuit.

3. Taking sickness of all kinds, has there been more or less than usual in your circuit the past year? How much?

4. Which of the following zymotic diseases have prevailed in your circuit during the past year? Please state when sporadic and when epidemic, whether mild, average or severe, and in what months they occurred, and in what localities?

	Sporadic or Epidemic.	Degree of Severity.	Months.	Locality.
a. Cholera Infantum.				
b. Croup.				
c. Diarrœhea and Dysentery.				
d. Diphtheria.				
e. Fever, Malarial.				
f. Fever, Typhoid.				
g. Measles.				
h. Scarlatina.				
i. Small Pox.				

j. Whooping Cough.

5. Any other zymotic disease epidemic.

OTHER DISEASES NOT ZYMOTIC.

Also, please state what degree of prevalence, whether large, average or small, and if above average, in what months was the large occurrence, of the following named diseases. State degree of prevalence and time of occurrence under the headings following :

	Degree of Prevalence.	Months.
k. Brain, Inflamation and Congestion of.		
l. Bronchitis, Acute.		
m. Meningitis, Cerebro Spinal.		
n. Pneumonia.		
o. Rheumatism.		
p. Stomach, Acute Diseases of.		

6. What diseases, not classed as zymotics, have had unusually large prevalence during the past year?

7. What diseases have been attended with unusual fatality?

8. Have any circumstances occurred within your observation or knowledge that seemed to indicate that Scarlet Fever, Diphtheria or Typhoid Fever had been taken or communicated from one person to another? A full history of known facts in detail should be given. Such history need not be confined to any particular year. State on separate sheet.

9. Has there been, in your opinion, any advance in public sentiment or views of individuals, in your circuit, in regard to the importance of sanitary surroundings; or any increased interest in means of preventing diseases? State what reasons for belief.

Very respectfully,

CHAS. H. FISHER,

Sec. of State Board of Health.

The following extract from the Public Statutes in relation to the duties of town and local boards of health and practicing physicians, was also appended :

PUBLIC STATUTES, CHAPTER 83.

SEC. 6. The secretary of the said board shall make inquiry from time to time, of the clerks of town and local boards of health and PRACTICING PHYSICIANS, in relation to the prevalence of any disease, or knowledge of any known or generally believed source of disease, or causes of general ill health, and also in relation to the proceedings of the said boards of health, in respect to acts for the promotion and protection of the public health, and also in relation to diseases among domestic animals in their several towns and localities respectively, and the said clerks of town and local boards of health, and the said PRACTICING PHYSICIANS shall give such information, in reply to said inquiries, of such facts and circumstances as shall have come to their knowledge.

IN REPLY TO THE FOREGOING CIRCULAR.

The following reports, received from local correspondents and others of the medical profession in the several cities, towns and villages of the State, will give a good representation of the general status of the public health during the year 1888, as to the presence or absence of epidemics or endemics or large prevalence of important or unusual diseases in the several locations, the sanitary conditions and improvements, if any, in their several circuits, and other suggestions in response to the preceding circular :

BRISTOL COUNTY.

2. BRISTOL.

3. Taking sickness of all kinds, the general amount has been larger during the past year.

4. The following zymotic diseases have prevailed during the year:

Diarrhœa and Dysentery. Sporadic. Moderate. July and August.

Fever, Typhoid. Epidemic. Moderate. July to October.

Scarlatina. Sporadic. Mild type.

5. No other zymotic disease epidemic.

Diseases not zymotic :

Brain, Inflammation and congestion of. Small number of cases.

Pneumonia. Small number of cases. Spring.

Rheumatism. Average number. Winter and spring.

6. No diseases have had unusually large prevalence during the past year except typhoid fever.

7. No diseases have been attended with unusual fatality.

10. The sources of ill-health are cesspools and privy vaults, and pollution of soil and wells resulting therefrom.

HENRY S. SWAN, M. D.

2. WARREN AND BARRINGTON.

3. Taking sickness of all kinds, there has been about the usual amount during the past year.

4. The following zymotic diseases have prevailed:

Cholera Infantum. Sporadic. Mild. Summer. Scattered.

Croup. Sporadic. Mild. Autumn. Scattered.

Diarrhœa and Dysentery. Sporadic. Mild. Summer. Scattered.

Diphtheria. Sporadic. Two Cases Severe. Summer. Scattered.

Fever, Malarial. Sporadic. Mild. Autumn and Winter. Scattered.

Fever, Typhoid. Sporadic. (Average severity, about 40 cases in all, according to the account of the different physicians.) Autumn. Scattered.

5. No zymotic disease epidemic.

Diseases not zymotic.

Brain, Inflammation and Congestion of. One case. August.

Bronchitis, Acute. Quite prevalent. Autumn and winter months.

Pneumonia. Quite prevalent last winter.

Rheumatism. Average.

Stomach, Acute Diseases of. Average. Summer months.

6. No other diseases have had unusually large prevalence during the year.

7. No diseases have been attended with unusual fatality.

G. L. CHURCH, M. D.

KENT COUNTY.

2. Warwick, River Point and Vicinity.

3. Taking sickness of all kinds, there has been ten per cent. more than usual.

4. The following zymotic diseases have prevailed during the year:

Cholera Infantum. Quite severe. Summer. All over the district.

Croup. Small amount.

Diarrhœa and Dysentery. Usual amount. Summer and fall.

Fever, Malarial. Less than usual.

Fever, Typhoid. Decided increase. Severe. Fall. Natick, Centreville, also a few cases in Phenix.

Measles. Less than usual.

Scarlatina. Very prevalent and severe in the spring. All over the district.

Whooping Cough. Less than usual.

5. No zymotic disease epidemic.

Diseases not zymotic.

Bronchitis, Acute. Considerable. Spring and fall.

Pneumonia. Full average. Severe type. Spring and fall.

Rheumatism. Usual amount all the year.

6. No other diseases have had unusually large prevalence.

7. Scarlatina, Pneumonia and Typhoid Fever, also Cholera Infantum—the death rate seems to have been slightly increased.

9. There has been a general awakening among the people in regard to sanitary matters.

10. It has been supposed by some that owing to the high water and saturated soil in the immediate vicinity of the Pawtuxet river, that Typhoid Fever has been thereby propagated, but it is somewhat doubtful.

Albert G. Sprague, M. D.

2. East Greenwich and adjoining towns.

3. Taking sickness of all kinds, there has been about the average during the past year.

4. The following zymotic diseases have prevailed during the year:

Cholera Infantum. Less than usual.

Diarrhœa and Dysentery. Not as much as usual.

Diphtheria. A few cases. Not bad.

Fever, Malarial. Not as much as last year.

Fever, Typhoid. A few cases. None fatal.

Scarlatina. Epidemic. Severe. From February to November.

Whooping Cough. Of late, quite prevalent.

5. No other zymotic disease epidemic.

Diseases not zymotic:

Pneumonia. About as usual in the spring months.

Rheumatism. Some severe cases in mid-summer. Inflammatory Rheumatism.

6. No diseases have had unusually large prevalence during the year except Scarlet Fever.

7. Scarlet Fever has been attended with unusual fatality.

8. Scarlet Fever has shown its usual capricious nature—confined almost entirely to the lower part of the town. Taking whole families in some cases, and in others one out of a family.

9. Some slight progress, but not very marked.

JAMES H. ELDREDGE, M. D.

2. COVENTRY and portions of adjoining towns.

3. Taking sickness of all kinds there has been a little more than usual during the past year.

4. The following zymotic diseases have prevailed during the year:

Cholera Infantum. A few sporadic cases. More than average severity. August. Coventry Centre and Washington.

Croup. Sporadic. Few mild cases.

Diarrhœa and Dysentery. In the villages during the warm weather.

Diphtheria. A few mild cases in the spring, fall and winter.

Fever, Malarial. Only two cases. Both severe. One imported.

Fever, Typhoid. One case. Severe, but recovered.

Measles. Few cases and of mild type.

Scarlatina. Epidemic during winter and spring months. *Very severe.* Few mild cases during the fall months. None during summer months. My last case in spring was at Weaver Hill, West Greenwich, and my first case, in following fall, on the same hill, and continued its course in a westward direction.

Whooping Cough. Real epidemic during fall and winter, many severe and protracted cases.

5. No other epidemics of zymotic disease.

Diseases not zymotic:

Brain, Inflammation and Congestion of. Two or three mild cases in summer.

Bronchitis, Acute. Very few, but obstinate cases in spring and autumn.

Pneumonia. Less than the average.

Rheumatism. More than the average.

Stomach, Acute diseases of. Two cases Gastric Fever, (?) Gastritis.

6. No other diseases have had unusually large prevalence during the past year.

7. No diseases have been attended with unusual fatality except Scarlatina.

8. I have good reasons for believing that, under certain conditions, Scarlatina and Diphtheria are communicated from one person to another, and Scarlatina can be carried five miles in clothing and then communicated to the susceptible.

9. A very little improvement in Washington.

10. Cesspools in our manufacturing villages, especially for tenement houses for mill operatives.

F. B. SMITH, M. D.

2. COVENTRY and part of WARWICK.

3. Taking sickness of all kinds there has been very much less than usual during the past year.

4. The following zymotic diseases have prevailed during the year.

Cholera Infantum. Average severity. Summer.

Croup. Average severity.

Diarrhœa and Dysentery. Average severity.

Diphtheria. Very little.

Fever, Malarial. Very little.

Fever, Typhoid. Very little.

Whooping Cough. Epidemic. November and December.

5. No other zymotic disease epidemic.

JOHN WINSOR, M. D.

2. WARWICK, CENTREVILLE, PHENIX, NATICK AND VICINITY.

3. Taking sickness of all kinds there has been about ten per cent. more than last year in my circuit.

4. The following zymotic diseases have prevailed during the past year:

Cholera Infantum. Sporadic during the latter part of summer, but of (a mild) type.

Croup. Sporadic. Scattered through the year.

Diarrhœa and Dysentery. Large amount. A mild character. Summer and fall.

Diphtheria. Sporadic. Less number of cases than the average.

Fever, Malarial. Sporadic. Quite severe. Summer months. In Natick.

Fever, Typhoid. Epidemic. Quite severe during the fall at Natick. Sporadic in the other villages.

Measles. Less than the average amount.

Whooping Cough. Usual prevalence throughout the year.

5. No other zymotic disease epidemic.

Diseases not zymotic.

Brain, Inflammation and Congestion of. Average prevalence during the summer months.

Bronchitis, Acute. Large prevalence. Spring.

Pneumonia. Large prevalence in winter and spring.

Rheumatism. Average number all the year round.

Stomach, Acute diseases of. Not common. A few cases during the hot weather.

6. No other diseases have had unusually large prevalence during the year.

7. No diseases have been attended with unusual fatality.

M. J. E. LEGRIS, M. D.

NEWPORT COUNTY.

2. NEWPORT, JAMESTOWN and MIDDLETOWN.

3. Taking sickness of all kinds, there has been no more than usual in this circuit during the past year.

4. The following zymotic diseases have prevailed:

Cholera Infantum. More than average. Sporadic. August and September.

Croup. Less than average. Sporadic.

Diarrhœa and Dysentery. Very little.

Diphtheria. Very little.

Fever, Malarial. None.

Fever, Typhoid. Average number. Sporadic.

Measles. Largely epidemic. February to June inclusive.

Scarlatina. Average number.

Whooping Cough. More than average.

5. No other zymotic disease epidemic.

Brain, Inflammation and Congestion of. Small number. October.

Bronchitis, Acute. Average number. March and April.

Pneumonia. Average number. January, February, March, April and May.

Rheumatism. Small number. Different months.

Stomach, Acute diseases of. Small number.

6. It can hardly be said that a very large prevalence of any of these diseases occurred, as no more than an average of any of them took place; but it may be said that Pneumonia and Bronchitis were the *prevailing* diseases in the months mentioned. The only epidemic was of Measles, of which 274 cases occurred, *or were reported*, with ten deaths.

7. No disease attended with unusual fatality, unless in the cases of Measles—ten deaths out of 274 cases reported.

9. I believe there is a steadily decreasing opposition to all sanitary measures adopted by the authorities for the prevention of diseases.

H. E. TURNER, M. D.

2. CITY OF NEWPORT.

3. The general health of the city has been good during 1888. Total number of deaths was 315, an equivalent to an annual death rate of 14.3 per 1000 inhabitants. This compares favorably with 1887, when the death rate was 14.2, and with 1886, when the death rate was 15.1 per 1000.

4. The deaths from Cholera Infantum, 19 in number, were confined to sections of the city where good household sanitation is not carried out. In two out of five of the wards there were no deaths from this disease. The percentage of deaths from Diarrhœl diseases was 9.8 of the total mortality, or three per cent. less than in 1887, but 5 per cent. more than in 1886. The total number of deaths from intestinal diseases, in 1888, was 31, including those from Cholera Infantum.

Croup. Eight deaths were reported from this disease, some of which should unquestionably have been diagnosed as diphtheria.

Diphtheria. In reply to the inquiry regarding the prevalence and contagiousness of this disease, I will take the liberty of quoting from my official report, as Secretary of the Newport Board of Health, to the City Council :

"The number of deaths (9) from Diphtheria was in excess of last year, but only one-half the number reported in 1886. While in a majority of cases, faulty sanitation has been the immediate cause of the disease, a large number owe their origin directly to contagion. In several instances the members of households in which diphtheria existed have communicated the disease, with fatal result, to others. The contagion was brought to one home by a child who had been suffering from a 'simple' sore throat. The sanitary condition of the house and premises was deplorable. The unwholesome atmosphere arising from a filthy cellar and defective soil pipe, together with the foul water from the well and cistern, vitiated the health of the inmates, rendering them easy victims to the disease. Five cases were reported from this house. Before quarantine was established one woman visiting the house, contracted the disease and communicated it to another household, where four were taken ill, one of whom died. There were ten cases in all, with two deaths directly traceable to the child who had a 'simple' sore throat.

In another section of the city, within a radius of three hundred feet, nine deaths occurred from diseases reported as Croup, Tonsillitis, Quinsey and Diphtheria.

The president and secretary of the board visited one household, where, within a few days, one death from Croup and one from Tonsillitis had been reported, and where a public funeral had taken place, and found two children ill with Diphtheria.

Owing to a number of deaths from throat troubles not reported as Diphtheria, yet taking place in close proximity to cases of Diphtheria, the board instructed the executive officer to forbid public funerals to all dying from any form of throat trouble, unless a special permit from the president or secretary of the board was granted."

Malarial Fever. Excepting when imported, is rarely met with.

Typhoid Fever. 26 cases of this fever were reported, occurring in 19 different habitations. Defective sanitary surroundings were found in 16 of these places, and in the other three no cause was found or no investigation made.

Scarlet Fever. An epidemic of a mild type prevailed early in the year. 94 cases were reported with four deaths therefrom.

Smallpox. During the month of March one case was imported on a government vessel. Four and six weeks respectively after quarantine was removed, two other cases occurred in one family. There was no known source of communication between the two households. The three cases were mild in type. An interesting feature of the third case was in the proof of the benefit of prompt vaccination after exposure. The third case, a child had never been vaccinated, prior to the Smallpox appearing on his brother. Immediately on the appearance of disease this child was successfully vaccinated in three places. Two weeks subsequently the child broke out with Smallpox of a mild form, and both the Smallpox and the vaccination ran their natural course.

Other diseases of a zymotic character have not prevailed to any extent.

The number of cases of acute diseases of the lungs, Bronchitis, Pneumonia, and Pleurisy, were fewer in number than the previous year, and there is no special note to make upon them.

Rheumatism. Average amount, and of a mild type.

There is a steadily growing sentiment in the community upon the importance of sanitation. Sewers are being extended, and there is a general desire, both upon the part of the city government and the people at large, to improve the sanitary condition of the city.

The local Board of Health has given special attention to check the spread of contagious diseases, and have instituted a number of reforms which will be instrumental in improving the general health of the city. Our death rate, of 14.3 per 1000, is lower than most cities of the size of Newport, yet the salubrious climate and good general physical surroundings call for a still lower rate.

The City Water Works Company have introduced a series of improved filtering tanks which will, if expectations are realized, remove a greater portion of vegetable matter which our city water holds in suspension.

FRANCIS H. RANKIN, M. D.

2. TIVERTON.

3. Taking sickness of all kinds, there has been less than usual during the past year.

4. The following zymotic diseases have prevailed during the past year:

Croup. Sporadic. Severe type. August. Tiverton Centre.

Fever, Typhoid. Sporadic. Average severity. October. Tiverton Centre.

Measles. Sporadic. Mild. December. Tiverton Centre.

Scarlatina. Sporadic. Severe. March. Tiverton Centre.

Whooping Cough. Sporadic. Severe. August. Tiverton Centre.

5, No other zymotic disease epidemic.

Diseases not zymotic.

Brain, Inflammation and Congestion of. Small. March.

Pneumonia. Small. April.

Rheumatism. Average. January and August.

6. No diseases have had unusually large prevalence.

7. Scarlatina has been attended with unusual fatality.

C. H. YALE, M D.

2. NEWPORT and MIDDLETOWN.

3. The general amount of sickness about the same as during the past year.

4. Zymotic diseases have prevailed during the year as follows:

Cholera Infantum. Sporadic. Average. August and September.

Diarrhœa and Dysentery. Sporadic. Average severity.

Diphtheria. Sporadic. All degrees of severity. March, April, June, December.

Fever, Typhoid. Sporadic. Average number. October and November.

Measles. None.

Scarlatina. Sporadic. Average severity. March, April, June.

Whooping Cough. Sporadic. Average. Occasionally throughout the year.

5. No zymotic disease epidemic.

Other diseases not zymotic, as follows :

Brain, Inflammation and Congestion of. Two cases.

Bronchitis, Acute. Not excessive. Winter months.

Pneumonia. Not excessive. Winter months.

Rheumatism. Usual number. Mostly in winter months, occasionally throughout the year.

Stomach, Acute Diseases of. Not excessive. Mainly in summer months.

6. No diseases had unusually large prevalence.

7. None attended with unusual fatality.

8. Within the past year I have seen two cases of Scarlet Fever that illustrate peculiarities in the modes of contagion.

1. A father, who had had Scarlet Fever in childhood, after exposure to the disease, suffered with what appeared to be Follicular Tonsillitis, with moderately severe constitutional symptoms lasting only a few days, and from which he recovered and suffered no subsequent troubles. He had no eruption nor any other sign of Scarlet Fever. About ten days later a child of his was taken with

plainly marked Scarlet Fever which showed all the usual symptoms and ran the usual course. The child had not been exposed to any other case except its father and the disease was not prevalent in town at that time, there being only two or three other cases. The points of interest in this case are, first, the apparent possibility of one who has already had the disease being still susceptible to the influence of the scarlatinal poison ; and, second, the possibility (apparent) of a true case of Scarlet Fever being developed after exposure to another case where every characteristic symptom was wanting except the sore throat, and moreover, when the disease did not run a regular course but terminate in a few days.

2. The second case illustrates the persistency of the vitality of Scarlet Fever poison. Two children were taken sick with Scarlet Fever almost simultaneously, without any known exposure to the disease and at a time when it was not prevalent in the city, there being only a few cases, and none in the part of the city where this family lived. Upon inquiry it was learned that four years ago four children (all then living) in this family had died of Scarlet Fever. The clothing that they had worn during their sickness had been packed in a trunk kept in an attic. A week or ten days before the children were taken sick something had been taken out of that trunk and used. This seemed the only way to account for these two cases.

9. I think there is a steady advancement of public opinion in this city in favor of good sanitation.

10. No known or generally believed source of ill-health.

C. F. Barker, M. D.

PROVIDENCE COUNTY.

2. Cumberland, Valley Falls and vicinity.

3. Taking sickness of all kinds, there has been a little less than usual during the past year.

Cholera Infantum. Sporadic. Mild severity. August.

Diarrhœa and Dysentery. Sporadic. Mild severity during the summer.

Diphtheria. Sporadic. Mild severity. Fall.

Fever, Malarial. Sporadic. Average severity. Very prevalent in spring and summer.

Measles. Sporadic. Mild severity. Summer.

Scarlatina. Sporadic. Mild severity. Fall.

Whooping Cough. Sporadic. Mild severity. Fall.

5. No zymotic disease epidemic.

Diseases not zymotic.

Bronchitis, Acute. Average prevalence. Spring and fall.

Pneumonia. Small prevalence. Winter.

Rheumatism. Small prevalence. October and November.

Stomach, Acute diseases of. Small prevalance. July and August.

6. No diseases have had unusually large prevalence.

No diseases attended with unusual fatality.

GEO. B. HAINES, M. D.

2. JOHNSTON, parts of PROVIDENCE and CRANSTON.

3. Taking sickness of all kinds there has been more than usual during the past year, perhaps five per cent.

Cholera Infantum. Little less. Sporadic. Severe. Middle and last of summer months.

Croup. Average. Average severity. Fall and winter, now and then cases from September to April.

Diarrhœa and Dysentery. Average, if anything little less. Summer and fall, going along into September and October. Severe.

Diphtheria. More. Very severe, in fall 60 per cent. of all cases almost malignant, severe from early October to April—some sections epidemic (Plainfield street and near lying districts.)

Fever, Malarial. More than ever before. Severe. Spring, summer and fall, even into the winter a few cases.

Fever, Typhoid. More by 15 per cent. on the average. Rather mild, but in some single cases severe. Fall and early winter.

Measles. Average. Mild. Fall months.

Scarlatina. More, by five per cent. Severe in some cases, but *very* mild on the average. September to December.

Whooping Cough. Plenty. Epidemic in district 15. Average severity. August to December.

5. German Measles, (Rothelen.) Epidemic. Severe. Fall and winter. Districts 15, 1, 16. School closed.

Other diseases as follows:

Brain, Inflammation and Congestion of. Average number and severity. July to December.

Bronchitis, Acute. More. Severe. Fall and winter. 12 per cent. nearly all months alike, due to damp open weather.

Meningitis, Cerebro Spinal. Did not see a single case during the year.

Pneumonia. About the same as last year. Fall and winter months. Average severity.

Rheumatism. Great prevalence—20 per cent. more. Very severe and showing in months from September to December.

Stomach, Acute diseases of. Average number and severity. Year around.

6. The diseases, not classed as zymotics, which had unusually large prevalence during the year, were Bronchitis and Rheumatism.

7. The diseases attended with unusual fatality were Diphtheria, Scarlet Fever, Pneumonia.

8. I believe such to be the fact, and proofs thereof are seen in cases in every outbreak.

9. Our town is waking up to the importance of sanitary surroundings and our board of health has been at work. They are looking out well and there is much improvement in the sanitary condition generally.

G. R. Fisher, M. D.

2. Lincoln, Central Falls and vicinity.

3. The general amount of sickness of all kinds has been about the same during the past year.

4. The following zymotic diseases have prevailed:

Cholera Infantum. Mild. July, August and September.

Croup. Only a few cases. March and April.

Diarrhœa and Dysentery. Sporadic. Not severe. October and November.

Diphtheria. Occasional cases every month.

Fever, Malarial. Epidemic in summer and fall.

Fever, Typhoid. Much more than for several previous years. Mild.

Scarlatina. Not many cases.

Whooping Cough. Very little.

5. No other zymotic disease epidemic.

Diseases not zymotic:

Brain, Inflammation and Congestion of. A few cases.

Bronchitis, Acute. Quite prevalent in spring months.

Pneumonia. Very little. February and March.

Rheumatism. Not as much as some years.

6. No other diseases have had unusually large prevalence.

7. None attended with unusual fatality.

9. There has been some advance in public sentiment in regard to the importance of sanitary surroundings.

A. A. Mann, M. D.

2. Foster and vicinity.

3. Taking sickness of all kinds, the general amount has been about the same as previous years.

4. The following zymotic diseases have prevailed during the year:

Cholera Infantum. Sporadic. Medium. September. Village of Foster Centre.

Diarrhœa and Dysentery. Sporadic. Medium severity. August and September.

Fever, Malarial. Sporadic. Medium severity. August and September.

Fever, Typhoid. Sporadic. Severe. September. All about town.

5. No zymotic disease epidemic.

Diseases not zymotic:

Bronchitis, Acute. Small number. Winter and spring.

Pneumonia. Small number.

Rheumatism. Average number.

Stomach, Acute Diseases of. Average number all the year.

6. No diseases had unusually large prevalence during the year.

7. No diseases attended with unusual fatality ?

H. Arnold, M. D.

2. Glocester and Burrillville.

3. Taking sickness of all kinds, there has been the usual number of cases during the past year.

4. The following zymotic diseases have prevailed during the year.

Cholera Infantum. Few sporadic cases. Average. August. Village.

Diarrhœa and Dysentery. Sporadic only. Average. Summer.

Fever, Typhoid. Several cases of average severity during fall, in Oakland, but hardly enough to call epidemic. A few cases in Chepachet, only two cases in the same family.

5. No zymotic disease epidemic.

Diseases not zymotic:

Bronchitis, Acute. Average. Spring.

Pneumonia. Large. March and April.

Rheumatism. Average.

Stomach, Acute Diseases of. Small.

6. No diseases have had unusually large prevalence during the past year ?

7. No diseases have been attended with unusual fatality.

G. A. Harris, M. D.

2. Centredale, North Providence, Johnston and Smithfield.

3. Taking sickness of all kinds, there has been fully one-third less than usual during the past year.

4. The following zymotic diseases have prevailed:

Cholera Infantum. Epidemic. Mild severity. August and September. Woonasquatucket Valley.

Croup. Sporadic.

Diarrhœa and Dysentery. Epidemic. Mild. October. Smithfield.

Diphtheria. Sporadic. Mild. Smithfield and Johnston.

Fever, Malarial. Epidemic. Severe from March to October. River Valley.

Fever, Typhoid. Sporadic. Mild. December. River Valley.

Measles. Epidemic. Severe during the spring. River Valley.

Scarlatina. Epidemic. Severe during the spring. River Valley.

Whooping Cough. Sporadic. Mild during the spring.

5. No other zymotic disease epidemic.

Diseases not zymotic:

Bronchitis, Acute. Very prevalent from December to May.

Pneumonia. Few cases in the spring months.

Rheumatism. Quite prevalent in the spring.

6. No other diseases have had unusually large prevalence during the past year.

7. No diseases attended with unusual fatality.

Chas. A. Barnard, M. D.

2. Scituate, (the western part, and parts of adjoining towns.)

3. Taking sickness of all kinds, there has been the usual amount during the past year.

4. The following zymotic diseases have prevailed during the year:

Cholera Infantum. Sporadic. Average severity. August and September. Scituate.

Croup. A very few cases.

Diarrhœa and Dysentery. Sporadic. Average severity. Fall months. Scituate.

Diphtheria. Hardly any cases.

Fever, Malarial. Sporadic. Average severity. Many. Scituate and Foster.

Fever, Typhoid. Sporadic. Average severity. August and September. Scituate.

Measles. Hardly any cases.

Scarlatina. Sporadic. Average severity. October and November. Kent, Ponagansett and Hope.

Whooping Cough. Hardly any cases.

5. No zymotic disease epidemic.

Diseases not zymotic:

Brain, Inflammation and Congestion of. A very few cases. October.

Bronchitis, Acute. Many cases. Spring, fall and winter.

Pneumonia. Small amount.

Rheumatism. A few cases. December.

Stomach, Acute diseases of: Several cases. Summer and fall months.

6. No other diseases have had unusually large prevalence during the past year.

7. No diseases have been attended with unusual fatality.

8. The contagion of Scarlet Fever was brought from cases in Posnegansett village, in the clothing of visitors to a family two miles away, and given to a boy five years old who had not been away from home.

9. The general sentiment in regard to sanitation is advancing.

10. Have no knowledge of any.

BARNARD ARNOLD, M. D.

2. SMITHFIELD and parts of adjoining towns, with Greenville as a center.

3. I should think about an average amount of sickness during the past year, taking all kinds—the most during the first half of the year.

4. The following zymotic diseases have prevailed during the year:

Cholera Infantum. Sporadic. Average type. Summer and early fall. No special locality.

Croup. Very little. Mild.

Diarrhœa and Dysentery. Sporadic. Average severity during latter part of the warm season.

Diphtheria. But little. Average severity. Scattered throughout the year.

Fever, Malarial. Average number of cases. Average severity. Prevailed mostly during the first half of the year, though occasional cases all through the year.

Fever, Typhoid. Very little, of average severity.

Measles. Very few cases. Mild. No particular season.

Scarlatina. Few cases. Average type. Winter and spring.

Whooping Cough. Very little. Mild.

5. No zymotic disease epidemic.

Diseases not zymotic:

Brain, Inflammation and Congestion of. Very little. Mild.

Bronchitis, Acute. About an average. Average type. Cold months.

Pneumonia. Small amount.. Average severity. Spring months.

Rheumatism. A few cases. Usual prevalence. Occasional cases throughout the year.

Stomach, Acute Diseases of. Small number, at usual season.

6. No diseases have had unusually large prevalence.

7. No diseases have been attended with unusual fatality.

8. I have not been cognizant of any such fact.

9. I have not observed much sanitary improvement during the past year.

10. No known, or generally believed source of ill-heath in my circuit.

R. P. Eddy, M. D.

2. Northern portion of Scituate and adjoining towns.

3. About an average, taking sickness of all kinds, in the general amount in my circuit during the past year.

4. The following zymotic diseases have prevailed during the past year:

Cholera Infantum. Sporadic. Ordinary. Summer. North Scituate.

Croup. Very little.

Diarrhœa and Dysentery. Very little. Mild. Summer. North Scituate.

Diphtheria. Very little. Severe. January, February, November and December.

Fever, Malarial. Very little. Very mild. All through the year.

Fever, Typhoid. Very little. Quite severe. October and November.

Whooping Cough. Epidemic. Very severe. Early part of the year. Scituate.

5. Mumps. Very severe. Spring and Summer. Scituate.

Other diseases not zymotic:

Bronchitis, Acute. Average amount. Spring and fall.

Pneumonia. Average amount. Very severe. Fall and winter.

Rheumatism. Usual number. All seasons.

6. No other diseases have had unusually large prevalence during the past year.

7. The diseases attended with unusual fatality were Pneumonia and Peritonitis.

8. No new observation or knowledge that seemed to indicate that Scarlet Fever, Diphtheria, or Typhoid Fever had been taken or communicated from one person to another.

9. No observable advance in public sentiment or views of individuals in regard to the importance of sanitary surroundings.

10. No generally believed source of ill-health in this vicinity.

W. J. Smith, M. D.

2. Smithfield, Greenville circuit, and parts of adjoining towns.

3. Taking sickness of all kinds, there has been about the average amount in my circuit during the past year.

4. The following diseases have prevailed during the year:

Cholera Infantum. Small number of cases of average severity in the usual season.

Croup. One case only. Quite severe. March.

Diarrhœa and Dysentery. Diarrhœa, usual amount, summer and fall. Dysentery, few cases of usual severity, spring and summer.

Fever, Malarial. A large amount of intermittent fever of average severity. Fully two-thirds of them were imported cases. Nearly every month of the year.

Fever, Typhoid. Very few cases. Sporadic. Mild. Fall months.

Measles. Quite a number. Very mild. Spring and summer.

Scarlatina. Few cases. Very fatal. Spring.

Whooping Cough. A few mild cases during the spring months.

5. No zymotic disease epidemic.

Diseases not zymotic:

Brain, Inflammation and Congestion of. Tubercular Meningitis, several cases of usual fatality, fall and winter. Meningitis Syphlitica, one fatal case. Fall.

Bronchitis, Acute. Average prevalence. Usual type. Spring and fall.

Pneumonia. Average number of usual severity. Spring and fall.

Rheumatism. Moderate amount of average severity. Summer.

Stomach, Acute Diseases of. Few cases of ordinary severity, mostly during the summer.

·9 No other diseases have had unusually large prevalence.

7. No diseases have been attended with unusual fatality with the exception of Scarlatina.

8. Several cases occurred which convinced me that Scarlatina was communicated from one person to another.

9. There seems to be very little interest taken in regard to the subject of sanitary surroundings, or increased interest shown in means for preventing disease.

E. A. Ballou, M. D.

2. Woonsocket and North Smithfield.

3. Taking sickness of all kinds, the usual amount has prevailed during the past year.

Fever, Malarial. More cases than usual.

5. No zymotic disease epidemic.

Diseases not zymotic:

Pneumonia. Greater than usual. March, April and December.

6. No other diseases have had unusually large prevalence during the past year.

7. Pneumonia has been attended with unusual fatality this year.

8. Very little advance in public sentiment in regard to the importance of sanitary surroundings.

10. There have been some sources of ill-health during the year, and others that exist, awaiting action on the part of local officers.

GEO. R. SMITH, M. D.

2. CITY OF PROVIDENCE.

3. The general amount of sickness has been about an average during the year.

4. The following zymotic diseases have prevailed during the past year:

Cholera Infantum. Usual number and degree of severity.

Croup. Not frequent.

Diarrhœa and Dysentery. About an average number.

Diphtheria. Sporadic. Average number. Unusual severity.

Fever, Malarial. Considerable prevalence in the western part of the city. April to December.

Fever, Typhoid. A large and unusual prevalence. November and December.

Measles. About usual prevalence.

Scarlatina. Average number.

Whooping Cough. Considerable prevalence. Usual severity.

Mumps largely prevalent. Summer and Autumn.

Other diseases:

Bronchitis, Acute. Average number. Spring and fall.

Pneumonia. Usual prevalence and severity.

6. No diseases not mentioned have had unusually large prevalence during the year.

9. Public sentiment, in relation to general sanitation, is evidently attaining a higher standard.

GEO. D. HERSEY, M. D.

WASHINGTON COUNTY.

2. CHARLESTOWN and RICHMOND.

3. Taking sickness of all kinds, there has been 25 per cent. more than usual during the past year.

4. The following zymotic diseases have prevailed:

Diarrhœa and Dysentery. Sporadic. Average severity during July and August.

Diphtheria. Sporadic. Mild severity throughout the year.

Fever, Malarial. Average severity during September, October and November in the villages of Carolina and Shannock.

Fever, Typhoid. Severe during August and September, at Carolina and Shannock.

Whooping Cough. Epidemic. Severe in December at Shannock and Kenyon.

5. No other zymotic disease epidemic.

Diseases not zymotic:

Bronchitis, Acute. Usual number. Average severity. January, February and March.

Pneumonia. Average number and severity. January, February and March.

Rheumatism. Average severity. March and April.

6. No diseases have had unusually large prevalence.

7. No diseases have been attended with unusual fatality.

A. A. SAUNDERS, M. D.

2. HOPKINTON and RICHMOND, HOPE VALLEY and vicinity.

3. Taking sickness of all kinds, there has been about an average during the past year.

4. The following zymotic diseases have prevailed.

Cholera Infantum. Very little.

Diarrhœa and Dysentery. Sporadic cases have prevailed during summer months.

Diphtheria. Very little Diphtheria and then only of a mild grade.

Fever, Malarial. A few sporadic cases.

Fever, Typhoid. Epidemic in July, August and September, in Arcadia and Rockville, of a mild grade—only cause known was the water in reservoirs.

Scarlatina. A few sporadic cases of a very mild type in the months of July and August.

Whooping Cough. Some cases. Not epidemic.

5. No other zymotic disease epidemic.

Bronchitis, Acute. Quite prevalent November and December.

Pneumonia. Very little pneumonia.

Rheumatism. The Sub-Acute variety has been quite prevalent during the colder months

Stomach, Acute Diseases of. Acute Dyspepsia was quite common in the summer and fall.

6. No diseases, not classed as zymotics, have had unusually large prevalence during the past year.

7. No diseases have been attended with unusual fatality.

8. These diseases have been so mild that it has been difficult to trace them. I had three cases of Typhoid Fever in one family—all recovered.

9. I think there is an increased interest in using all known means to prevent contagious disease from spreading.

ELISHA P. CLARKE, M. D.

2. North Kingstown.

3. Taking sickness of all kinds there has been the usual amount during the past year.

4. The following zymotic diseases have prevailed during the year:

Diarrhœa and Dysentery. More than usual. Entirely endemic, and some fatal cases of Dysentery in children.

Diphtheria. A few cases in Hamilton village during the spring months.

Fever, Malarial. A few cases.

Scarlatina. Some mild cases at Davisville.

5. No zymotic disease epidemic.

Diseases not zymotic:

Bronchitis, Acute. The usual amount.

Pneumonia. The usual number of cases.

Rheumatism. Mild cases.

6. No diseases have unusually prevailed during the past year.

7. No diseases have been attended with unusual fatality.

8. Diphtheria and Scarlet Fever generally "go through" the family and often occur in families that have no communications in any given locality.

C. E. Maryott, M. D.

2. South Kingstown.

3. Taking sickness of all kinds, the general amount has been the same during the past year.

4. The following zymotic diseases have prevailed:

Cholera Infantum. Sporadic dentition, producing Diarrhœa and Cholera Infantum, destroy more children than any other diseases in this town. Peacedale and Wakefield.

Diarrhœa and Dysentery. No peculiar features. Usual amount.

Fever, Malarial. Mild cases.

Fever, Typhoid. No epidemic, but six cases occurred at one time.

Scarlatina. Very little the past year.

Whooping Cough. Sporadic. Never knew a person to die from Whooping Cough in Kingstown. Five children in one family had Whooping Cough—no other cases occured in the village or anywhere else. The children had not been away. The mother had Whooping Cough years ago, but at this time she had what I supposed was Bronchitis. She did not whoop. Neighbors called it "Chin Cough."

5. No diseases epidemic.

Diseases not zymotic:

Bronchitis, Acute. Usual degree and number.

Pneumonia. Average. Fall and winter.

6. No diseases have had unusually large prevalence.

7. None attended with unusual fatality.

8. One case of fatal Diphtheria only, no one else had it in the neighborhood.

JOHN E. PERRY, M. D.

2. SOUTH KINGSTOWN.

3. Taking sickness of all kinds, there has been more than usual during the past year.

4. The following zymotic diseases have prevailed during the past year.

Cholera Infantum. Sporadic. Quite severe. August and September. Whole town.

Croup. March and April, Spasmodic Croup.

Diarrhœa and Dysentery. Sporadic. Unusually severe. Principally August and November,

Diphtheria. Some cases. Mild. Occasionally in course of the year.

Fever, Malarial. No cases contracted here. None but a few imported cases. Mild severity. Summer. Wakefield.

Fever, Typhoid. Sporadic. Quite severe March and April. Occasional cases scattered over town during the entire year. Wakefield and Matunuc.

Scarlatina. Few cases. Mild. April and May. Rocky Brook.

5. Other zymotic disease epidemic:

Varicella. Medium severity. March. School Dist. No. 1.

Diseases not zymotic:

Bronchitis, Acute. Medium amount winter and spring; uunsual amount autumn.

Pneumonia. Average number. April and May, chiefly.

Rheumatism. Above average. October, November and December.

Stomach, Acute Diseases of. Average. November and December.

6. Other diseases that had unusually large prevalence during the past year:

Large amount of Neuralgic affections during autumn. Due to extreme dampness(?)

7. No diseases have been attended with unusual fatality.

8. One case of Typhoid in my care seemed contracted while nursing friend through an attack of same.

9. I *think* there is increased interest in questions of sewerage, due probably to contemplated water works in Wakefield, Peacedale, Rocky Brook and Narragansett Pier.

P. K. TAYLOR, M. D.

2. WESTERLY.

3. Taking sickness of all kinds, there has been about an average.

4. The following zymotic diseases have prevailed:

Cholera Infantum. Sporadic. Moderate severity during the warm season.

Diarrhœa and Dysentery. Sporadic. Severe summer and fall in the village.

Diphtheria. Sporadic. Average. Winter in the village.

Fever, Malarial. Sporadic. Mild during the warmer months.

Fever, Typhoid. Sporadic. Average severity. Fall.

5. No zymotic disease epidemic.

Diseases not zymotic:

Bronchitis, Acute. Average prevalence and severity. Chiefly in the spring.

Pneumonia. Average prevalence and severity in the spring, summer and autumn.

Rheumatism. Much more than usual during the first eight months of the year.

Stomach, Acute diseases of. Average severity. Chiefly during the warmer months.

6. No diseases have had unusually large prevalence during the year.

7. No diseases attended with unusual fatality.

9. There has been but very unimportant advance in public sentiment in regard to sanitary surroundings.

J. H. Morgan, M. D.

REPORTS FROM TOWNS.

IN RELATION TO SANITARY IMPROVEMENTS, ETC.

For the purpose of presentation in this Report, as in the Reports heretofore issued, and in the continuance of the design to keep well informed of all proceedings throughout the State, on the part of town or city councils, or any form of municipal authority, in the appointment of health officers or boards of health, in the direction of improvements which have in view and seem to promise the promotion of the public health; by the abatement of nuisances; the removal of unsanitary conditions and surroundings; or by the introduction of water for general use; or construction of sewers; or the establishment of other public works, which may not only be of great public utility and convenience, but also serve in some measure, large or small, in the prevention of disease, the Secretary has, as heretofore, solicited replies from the town and city clerks of the several towns and cities, or other municipal officers, in answer to questions proposed in a circular sent for that purpose.

It is designed and hoped that a connected history may thereby be secured of all sanitary improvements of a public character in all parts of the State, from year to year, and the gradual awakening of the citizens of the different towns to the necessity of sanitary public measures shown; and also whatever intelligent appreciation of such necessity, and whatever public spirit in existence in the towns there may be, as manifested by the readiness with which needed sanitary measures are adopted.

The following is the form of circular sent at close of the year 1888:

CIRCULAR No. 75.

OFFICE OF SECRETARY OF THE STATE BOARD OF HEALTH.

48 WEYBOSSET STREET,
PROVIDENCE, R. I., Jan. 1, 1889.

To the Town Clerk:

It is, by statute law, made the duty of the Secretary of the State Board of Health to make inquiries of town or city clerks, or of the clerks of local boards of health, in regard to the general health and sanitary condition of the towns, and also in regard to measures taken for the improvement of the same.

The law reads as follows:

PUBLIC STATUTES, CHAPTER 83.

SEC. 6. The Secretary of the said Board shall make inquiry from time to time, of the clerks of town and local boards of health, and practicing physicians, in relation to the prevalence of any disease, or knowledge of any known or generally believed source of disease, or causes of general-ill health, and also in relation to the proceedings of the said boards of health, in respect to acts for the promotion and protection of the public health, and also in relation to diseases among domestic animals, in their several towns and localities, respectively; and the said clerks of town and local boards of health, and said practicing physicians, shall give such information, in reply to said inquiries, of such facts and circumstances as have come to their knowledge.

The Secretary therefore respectfully makes the following inquiries:

1. Has any work for the promotion of public health been contemplated or completed in your town by the town authorities, or by private enterprise, during the year? If any, please state what:

2. If by introduction or extension of water service for general use, please state what proportion of the population, by estimation, was supplied with the same at the end of the year.*

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*If not known by the person replying, please state where or of whom such information may be obtained.

3. If by sewage, state what the aggregate length of sewers, by estimation or otherwise, and about what proportion of the population had drainage connection with them at the end of the year.*

4. If by new ordinances in abatement of nuisances, or in improvement in heating or ventilating public buildings, halls, school houses, &c., or by drainage. or by compelling the removal of excreta, garbage, house refuse, &c., or for any sanitary purpose, please give terms and date of enactment of such town ordinance, or send copy of same, also state how far, to your best knowledge, all the sanitary ordinances have been enforced. Copies of town ordinances especially desired.

5. Has your town any legal board of health beside the town council? If so, please give the names of the officers of the same.

6. Please give the names of the health officers of your town.

7. Has gratuitous vaccination been provided in your town during the past year? What proportion of the population was vaccinated, according to your best knowledge?

8. Have undertakers promptly sent in their returns of death? Please give names of any who do not. (See Public Statutes, Chap. 85. Sec. 1.)

Respectfully,

CHAS. H. FISHER,

Sec. State Board of Health.

N. B.—The town or other clerk should charge a remunerative fee for replying to the above circular, and present to the town council or board of health, it being a service required by law.

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*If not known by the person replying, please state where or of whom such information may be obtained.

REPORTS FROM TOWN CLERKS.

In relation to the prevalence of disease, and to municipal proceedings in regard to public sanitary improvements, and the promotion of public health, &c.

BRISTOL COUNTY.

BARRINGTON.

1. No particular work for the promotion of public health completed in town by the town authorities.

2. The first water company, who brought water from Warren to Nayatt, supply about ten. The second company, "Drownville," supply, from their own spring of excellent water, most of the village—perhaps thirty.

3 and 4 negative replies.

5. Legal board of health, the town council.

6. Board of health, the town council. Pres., Lewis B. Smith.

7. No gratuitous vaccination provided during the past year.

8. Undertakers have promptly sent in their returns of death.

M. H. Wood, *Town Clerk.*

BRISTOL.

1. The town council and health officers have caused a general and thorough cleaning of privy vaults and cesspools throughout the compact part of the town, and largely used disinfectants.

2. No material increase in the use of water from the water service.

3. A sewer about fifteen hundred feet in length was constructed during the last season, which drains the principal school house, court house and jail, also many private residences on Court street; many more will probably enter soon as spring opens.

4. New ordinance adopted October 1, 1888.

AN ORDINANCE REGULATING THE SANITARY CONDITION OF THE TOWN OF BRISTOL, R. I.

It is ordained by the Town Council as follows:

Section 1. The following rules together with all additions to the same which may be made from time to time and also all ordinances and parts of ordinances relating to the Health of the Town now in existence not repealed hereby, shall constitute the Sanitary Laws of the Town, and shall be enforced in the same manner as all other ordinances are required to be ; Provided, that all complaints hereunder shall be made by a health officer of the Town Council:

1. Every building used as a dwelling house shall have connected with it at least one suitable privy or water closet for every fifteen or less occupants of such dwelling.

2. Every building used as a dwelling house shall, unless connected with an authorized drain or sewer, be provided with a suitable cesspool and be properly connected therewith.

3. Every cesspool and privy vault shall be so constructed that the same can be easily inspected and the contents thereof readily removed ; and so constructed that surface water cannot flow into such vault or cesspool ; and also that the contents thereof cannot flow out without overflowing onto the ground.

4. Every water closet, urinal, set bowl, tub, bath, sink, or fixture for like purposes, shall be connected with an authorized drain or sewer, or with a properly constructed cesspool and shall be provided with a suitable trap, so constructed and arranged as to prevent the escape through said fixture of any gasses. But no drainage from any water closet, urinal, set bowl, tub, bath, sink or cesspool shall be allowed to flow onto the surface of the ground or into the gutters of any street or highway in the Town. And every cellar and basement shall, so far as is reasonably possible be made impervious to moisture.

5. The four preceding rules shall apply to all property contained within the limits of the compact part of the town. Any owner of such property who shall permit any violation of said rules after reasonable notice from the Town Council, shall be fined not less than five nor more than twenty dollars for each day that said violation shall be persisted in.

6. Every person who shall deposit or suffer to be deposited in any water closet, privy vault, or cesspool, any swill, rubbish, or any matter other than that of which such a place is the appropriate receptacle, shall be fined not less than two nor more than ten dollars for each such offence.

7. Every owner or person having charge of the land on which any privy vault or cesspool is located, within the compact part of the town, shall cause such privy vault to be emptied of its contents at least once in each year ; and such cesspool to be emptied of its contents at least once in each six months and also whenever such cesspool shall be full ; Provided, that such privy vaults and cess pools shall be emptied of their contents whenever the same shall be ordered by the Town Council.

8. No person shall remove any portion of the contents of any privy vault or cesspool therefrom between the first day of June and the first day of October in any year without the written permission of the health officer first being obtained; Provided, that the contents of cesspools, which have become filled up, may be removed at any time, proper precautions being taken to prevent such contents being scattered on the ground.

9. No vehicle or receptacle shall be used to carry the contents of any privy vault or cesspool therefrom through any street or highway in the compact part

of the town unless such vehicle or receptacle shall be water tight, kept well painted and clean on the outer surface and provided with suitable covers, which shall be kept tightly closed while said contents are being removed.

10. Every vehicle and receptacle used for the purposes named in the preceding rule shall be licensed by the Town Council, which license shall remain in force until revoked for cause. And every such vehicle and receptacle shall have placed on the outside thereof in a conspicuous place, the number of said license and the number of cubic feet which such vehicle or receptacle will contain, painted in plain white figures not less than three inches long upon a black ground.

11. No person shall use or suffer to be used any vehicle or receptacle for the purposes above named without first complying with the provisions of the preceding rule.

12. The occupant of every building and every tenement where swill is made or where swill, garbage or offal may accumulate, shall provide a suitable receptacle, properly covered, for such swill, garbage or offal, and shall keep such receptacle in a cool, dry place outside of said building. No such occupant shall deposit or suffer to be deposited such swill, garbage, or offal in any cellar, yard, vault or any place other than such receptacle without special license from the Town Council issued by the Town Clerk so to do.

13. No occupant of any building or tenement shall deposit or suffer to be deposited any matter which shall properly belong in a cesspool or privy vault, any ashes, house sweepings, crockery, glass, tin, iron, or earthernware, or other rubbish of any kind, in any receptacle used for swill, garbage, or offal.

14. The occupant of every building or tenement shall cause all the swill, garbage and offal accumulating therein to be removed to the receptacle provided for the same, in accordance with the rule 12 preceding, at least once in every 24 hours; and shall cause all the contents of such receptacle to be removed therefrom at least twice each week from the month of May to the month of October both inclusive, and at least once each week from the month of November to the month of April both inclusive in each year, and as much oftener as the health officer of the town shall deem necessary.

15. No vehicle or receptacle shall be used to carry swill, garbage, or offal through any street or highway in the compact part of the town unless the same shall be water tight, well painted on the outside and kept clean and provided with tightly fitting covers, which shall be kept closed and securely fastened while said vehicle or receptacle is being moved from one place to another, and no such receptacle shall be used for any other purpose.

16. No swill, garbage or offal shall be deposited in any place where it may become offensive to or injurious to the health of any inhabitant of the town.

17. No person shall deposit or scatter or cause to be deposited or scattered upon any of the streets, highways, public grounds or vacant lots in the compact part of the town any swill, garbage or offal or offensive substances of any description without the permission of the Town Council first being obtained.

18. Every person who is now keeping or shall hereafter keep swine in the compact part of the town, shall comply with the following rules:

19. All swine shall be kept in pens large enough to allow 100 square feet of separate space therein for each swine, and strong enough to prevent the escape therefrom of any swine.

20. All swine shall be fed and watered from water-tight troughs so constructed and arranged that they cannot be upset and which can be shut off or removed from the reach of such swine at any time. Said troughs shall be thoroughly cleaned at least once each day, and no food shall be given to swine in any other place.

21. All pens used for keeping swine shall be cleaned out thoroughly at least once in each month from May 1 to November 1, and fresh straw, seaweed or other substance to absorb the moisture collecting in a pen, shall be placed in said pens whenever the same are cleaned out.

22. All refuse matter from feeding troughs shall be removed in the same manner as is provided in rules 14 and 15 preceding for the removal of swill, &c. And all matter taken from pens used for swine, in compliance with the preceding rule 21 shall be removed in a proper manner.

23. Any person neglecting or refusing to comply with or violating any of the provisions of the foregoing rule contained in this ordinance, wherein no penalty is otherwise prescribed shall be fined not more than twenty dollars for every such offence; and for every day's continuauce of the offence, after service of notice issued upon the first complaint shall be fined twenty dollars ; Provided, that any person who shall have been fined for any offence named herein may upon any subsequent complaint against him for a like offence be imprisoned not exceeding ten days in lieu of the fine herein provided.

24. All ordinances that are wholly inconsistent herewith and all parts of ordinances inconsistent herewith are hereby repealed. This ordinance shall take effect on Monday, October 1, 1888.

A true copy—witness:

HERBERT F. BENNETT, *Council Clerk.*

5. Board of health, the town council.
6. Health Officers, Lyman B. Bosworth and John B. Pearce.
7. Gratuitous vaccination is furnished to all who apply.
8. Undertakers are very prompt in sending their returns in.

HERBERT F. BENNETT, *Town Clerk.*

WARREN.

1. The town council early in the summer caused a thorough personal inspection of all premises to be made in the compact part of the town, by the health officer. In all cases where nuisances were found they were abated.
3. No new sewers have been constructed during the year.
5. Board of health, the town council.
6. Health Officer, Joseph M. Smith.

7. Gratuitous vaccination has been provided during the past year. I should estimate that about one sixteenth of the population was vaccinated.

CHARLES B. MASON, *Town Clerk.*

KENT COUNTY.

COVENTRY.

1. Nothing by the town authorities, but many private or personal in relation to sink drains and vaults.

2, 3, 4, negative replies.

5. Board of health, the town council.

6. Health Officers, Drs. John Winsor, G. Louis Wood and Charles L. Ormsbee.

7. No gratuitous vaccination provided during the past year.

8. Undertakers have promptly sent in their returns of heath, generally, so far as I now know.

S. W. GRIFFIN, *Town Clerk.*

EAST GREENWICH.

1. No work for the promotion of public health.

2. By extension of water service for general use, nothing new.

3. No public sewerage.

5. Board of health, the town council.

6. Health Officer, James H. Eldredge, M. D.

7. No gratuitous vaccination has been provided during the past year.

8. Undertakers have promptly sent in their returns of death.

EDWARD STANHOPE, *Town Clerk.*

WEST GREENWICH.

1, 2, 3, 4, negative replies.

5. Board of health, the town council.

6. Health Officers, the town council.

7. No gratuitous vaccination provided during the past year.

8. Undertakers have promptly sent in their returns of death.

WM. N. SWEET, *Town Clerk.*

WARWICK.

1. No work for the promotion of public health, except by public water service.

2. Extension of water service for general use through villages of Arctic, Lippitt, Clyde and Birch Hill.

3 and 4 negative replies.

5. Board of health, the town council.

6. Health Officer, Albert G. Sprague, M. D., River Point.

7. Gratuitous vaccination has been provided during the past year. About 200 vaccinated.

8. Undertakers have promptly sent in their returns of death.

J. S. Lockwood, *Town Clerk.*

NEWPORT COUNTY.

JAMESTOWN.

1. At a town meeting holden November 6, 1888,

VOTED: That the sum of $2000 be appropriated for the purpose of laying a sewer pipe of not less than 12 inches diameter from Howland Avenue down the Ferry Road and extending into Narragansett Bay, a distance of about 1500 feet.

Since this vote was passed it has been proposed, instead of running the sewer into the bay at the foot of Ferry Road, to run it southerly along Wallcott Avenue about 1000 feet to the corner of Walcott Avenue and Brook Street. If this is done it will drain nearly the whole village.

3. At a meeting of the town council held Tuesday, July 31, 1888,

VOTED AND RESOLVED: That where any drainage is carried into Narragansett Bay said drains shall be extended far enough into the bay for the current to take it away, and that the health officer notify all such parties to attend to the matter within five days, and if they are not so extended in that time to have it done and charge the owners with all expenses for the same.

CHAS. E. WEEDEN, *Town Clerk.*

Jamestown, R. I., January 30th, 1889.

5. Board of health, the town council.

6. Health Officer, Abbott Chandler.

7. No gratuitous vaccination provided during the past year.

8. Undertakers have promptly sent in their returns of death.

C. E. WEEDEN, *Town Clerk.*

MIDDLETOWN.

1. There has not been any work commenced or considered, designed to promote the public health in Middletown, during the year 1888.

2. There has been nothing done relative to providing a water supply for the town.

3. No proceedings have been taken in furtherance of the establishment of a system of sewerage.

4. There has been no necessity for the enactment of any supplementary measures to protect the public health, and no new ones have been adopted.

5. The town council is the only board of health in this town.

6. Health Officer, John Peckham.

8. Returns of deaths have been sent in more punctually than in former years.

There has been an unusual number of deaths in Middletown during the year 1888, notwithstanding the absence of all epidemic diseases. The two principal causes of deaths assigned are Bright's Disease of the Kidneys and diseases of the heart.

ALBERT L. CHASE, *Town Clerk.*

PORTSMOUTH.

1, 2, 3, 4, negative answers.

5. Board of health, the town council.

6. Health officers, the town council. Pres., Henry Anthony.

7. No gratuitous vaccination has been provided during the past year.

8. Undertakers have quite promptly sent in their returns of death.

P. B. CHASE, *Town Clerk.*

TIVERTON.

1, 2, 3, 4, negative replies.

5. Board of health, the town council.

6. Health Officers, Peleg D. Humphrey, Samuel E. Borden, Christopher Manchester, Austin Walker and Fernando A. Wilcox.

7. No gratuitous vaccination provided during the past year.

8. All undertakers do not promptly send in their returns of death. Names unknown.

JOHN T. COOK, *Town Clerk.*

No reports from the town clerks of Little Compton and New Shoreham Probably nothing in the line of public sanitary improvements to report.

NEWPORT CITY.

The following statements are largely excerpts from the Annual Report of the City Board of Health for 1888 :

1. A plan for a general sanitary inspection of the city and for a more careful enforcement of sanitary ordinances has been considered and, it is to be hoped, will be put in execution by the incoming board for the next year. The duties devolving upon the board are the enforcement of certain minor, although very

important, health ordinances. Upon the more weighty matters, however, the board is merely advisory. The disposal of garbage and night soil, in so far as this material affects the public health, the sanitary supervision of the city "dumps" and other sanitary matters are not referred to the Board of Health.

CITY WATER.

2. A very important undertaking has recently been completed by the Newport Water Works Company that will be instrumental, it is hoped, in giving to our city a purer water supply. This company has constructed at considerable expense a series of filtering tanks of the most modern and approved character, through which the water will pass before being pumped into the reservoir for general distribution. The filtration will remove the greater portion of the vegetable matter which was shown, by the analyses of last December, to exist in large quantities, and will in the future, if expectations are realized, yield a supply of water more agreeable in appearance, taste and odor than has been frequently experienced in the past. The establishment of these filters, perfect though they may be, does not detract from the importance of a careful supervision of the watershed. This duty must rest with the city authorities, who should be empowered to institute some form of sanitary inspection to prevent the water supply being contaminated by the night-soil which is carted out of the city limits, and should forbid the disposal of city garbage on land within the watershed. The filtration above mentioned will undoubtedly give a clearer water, but will not remove germs of disease which may find entrance from the night-soil, nor will it remove organic filth held in solution.

The medical profession in our city are, I think, about unanimous in their opinion that no serious illness has been traced to the city water ; at the same time they are equally unanimous in their judgment that the water contains too much vegetable matter to be used without careful filtration. The health, lives and comfort of so many thousands being more or less influenced by the character of the water used for drinking and cooking purposes, no pains or expense should be spared by the water works company and the city authorities to render the water pure. Impure water, even though it may not directly give rise to illness, lowers the tone of the system and opens the flood-gates for acute or chronic, or even contagious, diseases to find entrance.

The proposition to establish a cemetery in close proximity to Easton's pond, and directly within the watershed, was taken cognizance of by the Board of Health, who called the attention of the city government to the matter. The president of the board, Dr. Barker, appeared before the town council of Middletown and protested in the name of the city and the board of health against the project, and the request for the cemetery was properly denied.

3. The construction of sewers has been continued with fairly successful results. The greatest sanitary improvement in our city during the year has been the construction of the Thames Street and Ochre Point sewer. This will be instrumental in removing to the outer harbor an enormous amount of sewerage which has for years entered our inner harbor. It also offers means for extending the sewers of the city. The introduction of sewers necessitates the appointment of a competent person to superintend the direct connection of each house

with the sewer. This is a very important appointment, both for the protection of the public sewer and to insure the proper laying of the sewer pipe to the house, and should not be neglected longer by the authorities. Sewer connection should be compulsory in the thickly settled portion of the city in order to prevent the ground saturation from leaching cesspools, and as a means for the abolishment of vaults. Sewers should be extended as rapidly as possible in order to allow good surface drainage and dry cellars. Soil saturated with water is, as we have already pointed out, a prolific cause of ill-health. When the saturation is largely composed of leachings of cesspools and vaults the resulting evil is enormous. The benefits accruing from good drainage have been forcibly demonstated in several towns in England, where, after the introduction of proper drainage, the reduction in the death rate was very remarkable. In Salisbury the death rate from consumption fell 49 per cent.; in Ely, 47; in Rugby, 43; in Banbury, 41.

GARBAGE.

4. During the year the city swill has been deposited upon the Wilbur farm on Bliss Road and daily ploughed in as long as there was no frost in the ground. The executive officer has inspected the premises once or twice a week during the summer, and frequently during the autumn, making in all seventy inspections, and has uniformly reported compliance with the terms agreed upon for the disposal of the garbage. Notwithstanding the whole business has been conducted in as careful a manner as possible under the circumstances, complaints have been repeatedly made to the board of health, by those living in the neighborhood of the farm, that the premises were at times very offensive. From a sanitary point of view the disposal of the city swill at this place has one very grave objection, namely, it is on the watershed of the lower half of Easton's pond, from which, at times, the city water supply is drawn. The disposal of the city swill by cremation has been actively discussed in the city, and this method is most heartily endorsed by the board of health. From a sanitary standpoint it is the only safe method of getting rid of this material. There is no farm within the city limits upon which garbage can be placed without detriment to the health or pleasure of the community. We are debarred by law from removing it to Middletown, and taking it to sea is open to two objections, the expense and the danger of the material being carried back upon the bathing beaches.

NIGHT-SOIL.

Night-soil can be removed from the vaults only during the winter months, from November 1 to May 1; the carts are licensed and their exteriors are kept in fair order. The system in vogue should not be longer tolerated, for it is contrary to public decency and detrimental to health. The odor arising at the place of removal, as well as following the carts as they pass through the streets, is not only disgusting, but dangerous. Other methods of removal, even though they be more expensive, should be insisted upon. The old fashioned vaults should be abolished as speedily as possible in the thickly settled portion of the city, for they are breeders of ill-health and disease. When, however, they are necessary, they should be constructed in such a manner that they can be readily cleaned.

The ultimate disposal of the night-soil should be under the control of the health authorities in order that the public health may be guarded.

5. Newport has a special board of health.

Much depends upon a board of health fully equipped with power to remove all possible causes of disease. The board should receive the full confidence and support of the city officials and should have the same trust reposed in it as the family in their physician.

The members of the board of health are actuated in their work solely by motives of interest in the public welfare and should, therefore, receive all possible moral encouragement as well as sufficient financial aid. The Newport Board of Health has not received from the City Council during the year that expression of confidence and support which it deserves and which is necessary for efficient work.

The extinguishing of fires by the fire department and the arrest of criminals by the police are tangible evidences of the importance of these departments, and they are consequently well provided for. The health department is equally important, although its negative work of preventing disease can be demonstrated only by the comparative study of our mortuary statistics.

The necessity of a board of health is being more and more appreciated by the community. The amount of work accomplished by it, although perhaps not as great as it should have been, has borne fruit and its utility has been particularly demonstrated in checking the spread of contagious diseases.

The work done by the health authorities is of a negative character—that is, it seeks as much as possible to prevent illness. The hand that is instrumental in preventing the increase of disease is not always recognized, nor is it awarded the same credit and acknowledgment as the one that effects a cure. Yet the former is the more important, for we all know that "An ounce of prevention is worth a pound of cure."

The board reports that during the past year there has been a more general compliance than heretofore with the ordinance requiring the reporting of infectious diseases; consequently we have very accurate returns for them.

The board of health has given especial attention to the prevention of the spread of contagion by rigidly enforcing the ordinance requiring the posting of domicils in which illness of this character exists and, by frequent inspections of the premises by the executive officer, to prevent the removal of these notices. The executive officer has made six hundred and fifty visits to such premises.

House disinfection has been investigated by, or performed under, the direction of the board, and cesspools and vaults have been ordered disinfected and emptied in a large number of instances.

The importance of a hospital for contagious diseases has been frequently brought to the attention of the board of health during the past year. The benefit accruing from it would be incalculable, not only for the poor, but for the general public, by allaying the excitement that frequently arises during the summer months when infectious diseases appear on the general thoroughfare.

In one instance it was with the greatest difficulty that the board of health could provide quarters for a domestic suffering from scarlet fever. Difficulty was also experienced in obtaining accommodations for a patient seriously ill with diphtheria, who had no other abiding place than inadequate quarters in a stable.

A portion of section 7 of the ordinance creating the board of health reads as follows: "The board hereby appointed shall make all proper inquiry into the conditions of the public health of the City of Newport and into all things in said city which may in any way affect the public health thereof." This is not always an agreeable duty to perform, for in the fulfillment of it private interests are often antagonized and affected. Yet, as sworn officers, the members of the board of health are by section 7 of the ordinances forced to take cognizance of all matters detrimental to the public health.

In the execution of this duty the attention of the city government was called to the condition of Almy's pond as a source of ice supply and a request was made for an investigation of the pond. This request was not favorably acted upon.

The condition of the city "dumps," the disposal of garbage and night-soil, in so far as it affects the public health, and the city water and ice supply are among the prominent subjects which have claimed the attention of the board of health, but unfortunately they are questions upon which the board has absolutely no voice or decision and upon which the advice of the board has never been sought.

A sanitary supervision should be exercised of locations used for the disposal of city rubbish. The chief locations used for this purpose are the Merchant Street swamp and the section near Long Wharf. Much of the material used for filling in is decidedly unfit for that purpose and will prove a source of trouble in years to come by creating zymotic diseases among the unfortunate people who construct houses upon it. This is especially true of the section on the lower Fort Road. The collectors of the city rubbish should receive instructions to report all cases where swill and improper material is mingled with the ashes, when measures should be taken to prevent it.

6. The board of health is constituted as follows: C. F. Barker, M. D., Henry E. Turner, M. D., Francis H. Rankin, M. D., Wm. J. Underwood, Robert McIntosh. Henry E. Turner, Jr., Executive Officer.

PROVIDENCE COUNTY.

BURRILLVILLE.

1, 2, 3, 4, negative replies.

5. Board of health, the town council.

6. Health Officer, Herbert F. Mowry, Burrillville P. O.

7. There was no gratuitous vaccination last year. Measures have already been taken to have it done this year (1889).

8. The returns of death were promptly sent in during the past year.

Alvah Mowry, *Town Clerk.*

CRANSTON.

1. No particular work for the promotion of public health during the year.

2. See Reports City Engineer and Board of Public Works, Providence.

3. See, as above.

4. No new ordinances in abatement of nuisances or other sanitary purposes.

5. The board of health, the town council.

6. Health Officer, Fred. W. Bradbury, M. D.

7. No gratuitous vaccination provided.

8. Undertakers have promptly sent in their returns of death.

D. D. WATERMAN, *Town Clerk.*

CUMBERLAND.

2. See Report Pawtucket Water Commissioners.

3. No Sewerage.

4. No new ordinances in abatement of nuisances.

5. No legal board of health beside the town council.

6. Names of the Health Officers, John S. Hindley, Halsey C. Rawsan, Frank E. Miller, Eliab D. Whipple.

7. Gratuitous vaccination has not been provided during the past year.

8. Some undertakers do not promptly send in their returns of death.

J. F. CLARK, *Town Clerk.*

EAST PROVIDENCE.

1. Council passed the following ordinance regulating carting swill through and into the town :

AN ORDINANCE RELATING TO SWILL, GARBAGE AND REFUSE.

It is ordained by the Town Council of the Town of East Providence as follows:

SECTION 1. No person, except as hereinafter provided, unless designated by the Town Council of said town, shall bring, remove, carry or transport any swill, house offal, garbage or refuse of any kind over, upon, or through any street or highway in said town.

SEC. 2. No person, except as hereinafter provided, shall deposit, or cause to be deposited, upon any of the streets, highways, public grounds or vacant lots of said town, or in any place whatever therein, except a proper receptacle, any swill, offal or any offensive substance, except by permission of the health officer.

SEC. 3. No person or persons, except as hereinafter provided, either themselves or by their agents or servants, shall cause or permit to be carried into or through said town, into or through any street or highway thereof, any part of the contents of any privy vault or cesspool in any cart, wagon or other vehicle, except between the first day of December and the first day of May, without the written permission of the health officer.

SEC. 4. Nothing herein contained shall be so construed as to prevent residents of said town, or others having the charge, care or custody of premises therein, from removing swill, garbage, house offal, contents of privy vaults and cesspools from their premises in said town to proper receptacles therein.

Sec. 5. Every person violating any of the foregoing provisions shall be fined net less than two nor more than twenty dollars.

Thos. A. Sweetland, *Town Clerk.*

2. See Report of Chas. E. Peirce, Supt.
3. See, as above.
4. See ordinance appended.

AN ORDINANCE IN AMENDMENT OF CHAPTER 14, SECTION 1, OF THE ORDINANCES OF EAST PROVIDENCE, ENTITLED "SWINE."

It is ordained by the Town Council of the Town of East Providence:

Section 1. Section 1 of chapter 14 of an ordinance comprising the ordinances of the Town of East Providence, is hereby amended so as to read as follows:

No person shall keep any swine within the distance of three hundred feet of the residence of any other person without first obtaining a written permit from the health officer, and permits so granted may be revoked by said health officer upon request of any person or persons owning or occupying residences within said distance, or whenever in the opinion of said health officer the premises where said swine are kept becomes offensive and the owner or keeper thereof neglects and refuses to remedy the same.

5. Board of health, the town council.
6. Health Officer, Samuel H. Allen.
7. Gratuitous vaccination has been provided during the past year. We have three physicians, one in each district of the town. They have not made any returns as yet.
8. Undertakers have promptly sent in their returns of death.

Thos. A. Sweetland, *Town Clerk.*

FOSTER.

1. No new work for the promotion of public health.
2. No water service in the town.
3. No sewerage system in the town.
4. No new ordinances in abatement of nuisances or other sanitary object.
5. Board of health, the town council.
6. Health Officer, Dr. Henry Arnold.
7. Do not know that gratuitous vaccination has been supplied to any.
8. Do not think returns have been intentionally delayed.

Daniel Howard, *Town Clerk.*

GLOCESTER.

1, 2, 3, 4, negative replies.

5. Board of health, the town council.

6. Health Officer, George A. Harris, M. D.

7. No gratuitous vaccination provided during the past year.

8. Undertakers have promptly sent in their returns of death.

CHAS. W. FARNUM, *Town Clerk.*

JOHNSTON.

1. No unusual work for the promotion of public health.

2. By introduction or extension of water service for general use, the proportion of the population by estimation supplied with the same at the end of the year—probably one-half.

3. No public sewerage.

4. We have a new school house in Dist. No. 15, supplied with steam heating apparatus of modern construction. Our ordinances are now being revised by a committee appointed by the town council for that purpose.

5. No legal board of health beside the town council.

6. Health Officers, Thomas C. Lawton, M. D., Chas. A. Barnard, M. D., Elmer S. Fiske, M. D., William A. Carroll, Esq.

7. No gratuitous vaccination provided during the past year.

8. Undertakers have promptly sent in their returns of death, so far as I am able to judge.

W. F. KING, *Town Clerk.*

LINCOLN.

1. No work for the promotion of public health during the year.

2. By introduction or extension of water service for general use, the proportion of the population supplied at the end of the year—about seven-eighths.

3. About 1200 feet of sewers have been laid the past year. Very few families have connected, probably less than 20 at this time ; more will connect soon.

5. Board of health, the town council.

6. Health Officer, A. A. Mann, M. D.

7. No gratuitous vaccination provided during the past year.

8. The undertakers go from Woonsocket to Manville in our town, and do business, and fail to make returns.

WM. H. GOODING, *Town Clerk.*

NORTH PROVIDENCE.

1. No work for the promotion of public health.

2. Water has been introduced at Lymansville from the city.

3. No public sewerage.

4. No new ordinances in abatement of nuisances dangerous to health. Old ordinances, 1885, enforced very well.

5. Board of health, the town council.

6. Health Officer, Wm. O. Cowing.

7. No gratuitous vaccination provided during the past year.

8. Undertakers have promptly sent in their returns of death.

THOMAS H. ANGELL, *Town Clerk.*

NORTH SMITHFIELD.

1. More attention has been paid to sanitary arrangements than in former years.

2 and 3 negative replies.

4. See ordinances appended.

AN ORDINANCE IN RELATION TO CONTAGIOUS OR INFECTIOUS DISEASES.

It is ordained by the Town Council of the Town of North Smithfield as follows:

SECTION 1. Every physician having knowledge of the existence of any contagious disease within the Town of North Smithfield shall immediately make a report thereof to the health officer of said town.

SEC. 2. The diseases referred to in the preceding section shall include among others, smallpox, diphtheria, typhoid fever, typhus fever, scarlet fever or scarlatina.

SEC. 3. Whenever there is a case of scarlet fever, diphtheria, or any contagious or infectious disease in any house in the town, the health officer shall cause to be placed upon such house a card bearing the name of the disease therein existing, and any person who shall remove said card, except by permission of the health officer, shall upon conviction thereof pay a fine of not more than twenty dollars.

SEC. 4. No person shall retain, expose or allow to be retained or exposed, the body of any person who has died of smallpox, diphtheria, scarlet fever, typhus fever or Asiatic cholera, to the peril or prejudice of the life or health of any person.

SEC. 5. Any person who shall violate any provision of the foregoing ordinance shall upon conviction thereof pay a fine of not more than twenty dollars, and any undertaker who shall violate any provision of the foregoing ordinance, upon conviction thereof, shall in addition to the above penalty be thereupon and thereby removed from the office of undertaker.

SEC. 6. This ordinance shall take effect from and after its passage.

Attest: BYRON A. ANDREWS, *Council Clerk.*

AN ORDINANCE TO PROHIBIT PUBLIC FUNERALS OF PERSONS WHO DIED OF ANY CONTAGEOUS DISEASE.

It is ordained by the Town Council of the Town of North Smithfield as follows:

SECTION 1. No undertaker or other person in this town who shall have charge of or who shall conduct any funeral of any deceased person in this town who died of smallpox, diphtheria, scarlet fever or any other contagious or infectious distemper, shall allow or permit such funeral to be attended by any person or persons, except by the immediate members of the family of such deceased person and who live in the same house where such deceased person died, and the undertaker in charge of the funeral and his assistants.

Any violation of the foregoing by any person in this town shall be deemed a misdemeanor, and the person so offending, upon conviction thereof, shall pay a penalty of twenty dollars for each offense, to be recovered to and for the use of this town, by complaint and warrant before the District Court of the Twelfth Judicial District of this State.

SEC. 2. This ordinance shall take effect from and after its passage.

Attest: BYRON A. ANDREWS, *Council Clerk.*

The foregoing ordinances were passed by the town council of the town of North Smithfield, May 1, 1888.

Attest: BYRON A. ANDREWS, *Council Clerk.*

5. Board of health, the town council.
6. Health Officer, Joshua Wardle.
7. No gratuitous vacccination provided during the past year.

B. A. ANDREWS, *Town Clerk.*

SCITUATE.

1, 2, 3, 4, all negative.

5. No legal board of health beside the town council.
6. Health Officer, W. J. Smith, M. D.
7. No gratuitous vaccination provided during the past year.
8. All undertakers do not promptly send in their returns of death.

D. H. REMINGTON, *Tomn Clerk.*

SMITHFILED.

1, 2, 3, 4, negative replies.

5. Board of health, the town council.
6. Health Officer, Jenckes Smith.
7. No gratuitous vaccination provided during the past year.

OSCAR A. TOBEY, *Town Clerk.*

WOONSOCKET.

1. No particular work for the promotion of public health completed by the town authoriries during the year.

2. By extension of water service for general use, the proportion of the population, by estimation, supplied at the end of the year—about one half.

3 and 4, negative replies.

5. Board of health, the town council.

6. Health Officer, Dr. George W. Jencks.
7. No gratuitous vaccination provided during the past year.
8. Undertakers have sent in their returns of death satisfactorily.

ALLEN E. GREENE, *City Clerk.*

PROVIDENCE CITY.

1. See new ordinances, question 4.
2. See extracts from Report of City Engineer, appended.
3. See as above.
4. The following ordinances were passed :

CHAPTER XXV.

AMENDMENT OF CHAPTER X OF THE RULES AND REGULATIONS OF THE BOARD OF ALDERMEN, ENTITLED "SANITARY CODE."

[Adopted June 14, 1888.]

UNWHOLESOME PROVISIONS.

65. It shall be the duty of the superintendent of health or any inspector appointed by this board for that purpose to visit from time to time and at frequent intervals all places within this city where fruit, vegetables, meat, fish or other provisions liable to become decayed, diseased or unwholesome, shall be kept, offered or exposed for sale, and if he shall find or be informed that any of said articles so kept, offered or exposed for sale, are decayed, diseased or unwholesome, he shall forthwith carefully inspect the same ; and if in his opinion the same are decayed, diseased or unwholesome, the superintendent of health or any inspector appointed by this board may seize such decayed, diseased or unwholesome fruit, vegetables, meat or other provisions, and said superintendent shall prepare a certificate in writing which shall contain a true statement of the nature, condition and quantity of the same, of the place where the same were found, and the name of the owner thereof, or of the person in whose possession the same were found, and after signing said certificate in his official capacity of superintendent of health, he shall file the same in his office and send a copy thereof to the mayor.

66. After filing said certificate in the office of the superintendent of health, said officer shall issue an order in writing directing the immediate destruction of said articles named in said certificate, which order may be executed by said inspector under the immediate supervision of said superintendent of health.

CHAPTER XXVI.

AMENDMENT OF CHAPTER X OF THE RULES AND REGULATIONS OF THE BOARD OF ALDERMEN, ENTITLED "SANITARY CODE."

[Adopted June 21, 1888.]

DUMPING GROUNDS.

57. The board of public works shall furnish a man for each of the dumping grounds, viz. : at the corner of Acorn street and Harris avenue, at Long Pond

and within the lines of Allen's avenue, who shall cover with clean earth or ashes the offensive and decaying matters deposited on said dumping grounds.

5. The board of aldermen acts as a board of health.

6. Charles V. Chapin, M. D., Supt. of Health, Gardner T. Swarts, M. D., Medical Inspector, John S. Rogers, Sanitary Inspector, Charles H. Leonard, M. D., Chief of Vaccinating Staff.

7. Gratuitous vaccination has been provided during the year. See Report of Health Officer.

8. Undertakers have promptly sent in their returns of death.

EXTRACTS FROM THE REPORT OF THE CITY ENGINEER.

Twenty-eight hydrants have been set during the year.

The total number of hydrants to December 31, 1888, is twelve hundred and ninety-four, including forty in the town of Johnston. This number does not include eleven post hydrants which are set in the town of Cranston.

Following is a statement of the length of water pipe in the ground January 1, 1889, considered as mains :

Length in feet, 1,110,737.29; length in miles, 210.367.0.

3,719.3 feet of 4-inch pipe, not included in the above, are laid at the Pipe Yard, Roger Williams Park and North Burial Ground.

Included in the above are the lengths of pipe which are laid in adjoining towns of Cranston, Johnston, North Providence, Warwick.

The annual and the average daily consumption of water, including waste and leakage, during the year 1888, is shown as follows : Annual consumption, 2,019,840,962 ; average monthly consumption, 168,320,080 ; average daily consumption for the year, 5,518,691.

The amount of water consumed, shown above, includes the supplying of about 16.7 miles of distribution pipes located in adjoining towns, as well as supplying the greater part of the State Institutions at Cranston.

The receipts for water each year since the commencement have been as follows :

Year.	Amount.	Year.	Amount.
1872	$41,003 51	1881	$260,530 87
1873	97,386 09	1882	269,318 77
1874	132,052 39	1883	283,632 89
1875	165,144 71	1884	302,368 36
1876	183,868 73	1885	313,561 21
1877	200,039 39	1886	323,084 67
1878	218,883 33	1887	339,513 60
1879	229,551 78	1888	346,731 58
1880	247,705 06		

Sizes and length of sewers constructed during 1888 :

	PIPE.		CIRCULAR BRICK SEWERS.	OVAL BRICK SEWERS.			Totals.
	12 inch.	15 inch.	56 inch.	22x23 inch.	28x42 inch.	38x57 inch.	
Total length in feet...........	10,228.73	1,021.07	1,083.50	531.25	1.047.30	111.85	14,023.70
Total length in miles........ .	....	....	....	....	....	....	2.656

A statement of the total lengths of each size of sewer constructed to January, 1, 1889 :

	Constructed previous to 1888.	Constructed in 1888.	Totals.
Total length in feet	306,604.72	14,023.70	320,628.42
Total length in miles..................	58.069	2.656	60.725

SEWER DEPARTMENT.

As will be seen from the preceding table, 2.656 miles of sewers have been built the past year, 2.131 miles of which was of pipe, and .525 miles were of brick, making a total of 42.311 miles of pipe and 18.414 miles of brick sewer, a total length of 60.725 miles of sewer built to date.

There have been built and connected with the sewers constructed the past year fifty-six catch-basins, nine extra inlets and ninety-five manholes. One catch-basin and two extra inlets were built to take surface water, and were connected with old drains.

The total number of catch-basins in use January 1, 1889, is 2,095.

The total number of manholes connected with the present system is 3,028.

The number of new house connections made in 1888 was 321, with 235 permits to extend drains already laid.

The total number of house connections made with the sewers January 1, 1889, is 5,238. It is estimated that these connections take the sewage of about 54,000 people.

Work on the improved sewerage plans has progressed so far as to enable considerable work to be let in a short time when ordered.

The land necessary for the pumping stations, precipitation tanks, with connecting conduits, discharge sewers, etc., has been bought, stone bounds have been set, and posts placed so as to plainly indicate the lines.

The land recently bought, together with the lands previously owned by the city, will be sufficient for the construction of all work now contemplated at Field's Point.

PARKS AND PUBLIC BUILDINGS.

At Roger Williams Park the principal work has been the improvement of the swamp northerly of the deer pen. A little over one-half of this swamp area is to be converted into a lake. This work, owing in part to the unusually wet season, has not progressed as fast as was expected. A plan and specifications for accomplishing this purpose and estimates of the amount of work performed during each month since the beginning of the work have been prepared. No new drives or walks have been constructed during the past year. A large number of trees and shrubs were planted on the sections between Elmwood avenue and the railroad station, and adjoining the small pool near Broad street entrance, stakes being placed for the location of each tree or shrub.

HAYWARD PARK.

A plan and estimate of the cost of improving the park on Beacon and Plain streets, recently named Hayward Park in honor of ex-mayor William S. Hayward, have been prepared for the committee on parks.

S. M. Gray, *City Engineer.*

PAWTUCKET.

2. See extracts from the Water Commissioners' Report appended.

3. Considerable attention has been given to the extension of sewers. Report of Sewer Commissioners not received.

5. No legal board of health beside the board of aldermen.

6. Health officer, George H. Stanley, M. D.

7. Gratuitous vaccination has been provided.

8. Undertakers have promptly sent in their returns of death.

EXTRACTS FROM THE REPORT OF WATER COMMISSIONERS.

The city of Pawtucket has now a system of water works second to none in the country, and of a capacity sufficient for the wants of the community for many years to come. The healthy growth of the works is demonstrated by the steady increase of the receipts from about eight thousand dollars in 1879, to nearly a hundred thousand dollars in 1888.

The new pumping station and appurtenances, built during the past year, completes the system originally contemplated by your commissioners. We call special attention to the analysis of the water used by our citizens made by Professor Drown of the Massachusetts Institute of Technology. The results are highly satisfactory. At this time, when attention is directed to the quality of water furnished, a careful perusal of the report will be interesting to water-takers. For the details of the work done during the year we refer to the report of the superintendent.

The appropriations required for the coming year, for general construction, is $30,000. This includes the Pawtucket, East Providence and Lonsdale and Valley Falls divisions, and other work deemed necessary by the commissioners.

The receipts for the past year have been as follows:

For water rates	$93,919 01
For labor, and material sold	6,727 17
Making the total receipts	$100,646 18

all of which has been paid into the city treasury.

Permit us, in conclusion, to call your attention to the magnitude of the department. The amount of labor, care and attention required of our faithful superintendent has been steadily increasing from year to year.

The most critical examination of the management is not only desired but respectfully invited. In no other way can the labors performed by the management be intelligently appreciated.

LUCIUS B. DARLING, }
OLNEY ARNOLD, } Water Commissioners.
R. D. MASON, }

ANALYSIS OF WATER.

MASS. INSTITUTE OF TECHNOLOGY,
BOSTON, December 29, 1888.

Mr. Edwin Darling, Superintendent of Water Works, Pawtucket, R. I.

DEAR SIR: I send you herewith the results of my examination of the samples of water collected by myself, on December 20th, from the water supply of the city of Pawtucket. The samples comprise:

1. Water from the top of the reservoir, at Diamond Hill.
2. Water flowing from the bottom of the reservoir.
3. Water from Grant's Brook, just below the reservoir.
4. Water from Abbott's Run, at Rawson's Dam.
5. Water from Abbott's Run, at Adamsdale.
6. Water from pond at Station No. 2.
7. Filtered water from Station No. 3.
8. Filtered water from Station No. 2.
9. Washings from filter at Station No. 2.
10. Water which had filtered through the gravel on the western side of the overflow of the reservoir.

The first six samples of water are, from a chemical standpoint, essentially the same in character. The flowing water in Grant's Brook, and in Abbott's Run, and in the pond at No. 2 Station contain, however, much less free and albuminoid ammonia than the still water of the reservoir. It is impossible to know, from this one series of analyses, whether this is a permanent condition of affairs, or whether it is temporary in character, connected, perhaps, with the recent heavy rain fall. It has been noticed that surface waters, more particularly of ponds and reservoirs, have a tendency to develop high free ammonia in the winter months.

It is interesting to note that the free ammonia is less in amount in the water which flows from the bottom of the reservoir than it is in the water at the top of the reservoir. The living organisms are also in less quantity in the water at the bottom than at the top. When the water, flowing from the reservoir into Abbott's Run, reaches Adamsdale, a distance of five miles, and passing over four dams, the free ammonia has entirely disappeared.

The water from the filter, at Station No. 3, has appreciably less suspended matter and sediment than the unfiltered water from the pond. This can be seen by a simple inspection of the water in a clear, white-glass, gallon bottle. There is, however, in the filtered water about the same amount of albuminoid ammonia as in the unfiltered. This is due to the fact that most of the albuminoid ammonia is *in solution* ; for when the water is completely freed from its suspended matter and sediment, by filtering through paper in the laboratory, there is very little albuminoid ammonia removed.

The filter at Station No. 3 (containing 2,060 square feet surface) had, at the time of taking the samples, not been cleaned for ten days, and in this time twenty-four million gallons had passed through it. It was not, therefore, in a condtion of its greatest efficiency. The filter at station No. 2 (containing 460 square feet surface) had, likewise, not been cleaned for ten days, and there had passed through it in this time fifteen million gallons. This filter does not contain any charcoal as is the case in the filter at Station No. 3, and perhaps, for this reason it is not as efficient in removing suspended matters. The washings from this filter were very dirty, showing that a large amount of earthy and vegetable matter had been taken out of the water during the period it had been in operation.

Mr. George H. Parker, of Harvard College, has made for me a microscopic examination of the vegetable and animal life in samples Nos. 6, 7 and 8. He found in them three or four species of diatoms, the most prominent being *Asterionella*, and one animal form, namely, *Peridinium*. The quantity of these organisms in the filtered water from Station No. 3, was distinctly less than in the pond water, but the quantity was rather greater in the filtered water from Station No. 2. In the washings from the filter the same forms were recognized, but in very much greater quantity.

Mr. Charles B. Davenport, of Cambridge, has examined the samples Nos. 1, 2, 3, 4, 5 and 10. As in the other samples the diatoms were abundantly present, *Asterionella* being the most prominent in the reservoir and in Abbott's Run, and *Tabellaria* and *Synedra* in the waters of Grant's Brook. Of the animal forms *Peridinium* was most abundant in the reservoir and *Dynobryon* in Grant's Brook. All of these organisms are found generally in good surface waters.

The water collected below the reservoir, which had filtered through the gravel on the western side of the overflow, a distance of about two hundred and fifty feet, has all the qualities of a spring water. It is colorless, and nearly all of its nitrogenous organic matter has been converted into nitrates. The living organisms in this water were mostly diatoms.

With the exception of this last mentioned sample, all of the waters are more or less colored. The figures given for color, in the accompanying table of analysis, are on the scale used in the water analyses of the Massachusetts State Board of Health. The intensity of the color decreases from the reservoir to the pond. It was said to be more highly colored than usual owing to the recent heavy rains.

The water has no odor at the present time. When heated there was developed a faintly vegetable odor in the waters of the reservoir and the pond. This odor was very strong when the washings of the filter were heated.

In forming an opinion of the character of the water supply from this chemical and biological examination, it must be borne in mind that the water was collected in the winter, after heavy and long-continued rains. The vegetable growth would probably be different in the warmer seasons of the year, and also much more abundant. Under these conditions of greater activity of vegetable growth, there would be a greater necessity for filtration, and the filters would, without doubt, be relatively much more efficient.

As the result of this single series of examinations, it may be said that the present condition of the water supply of Pawtucket is in a satisfactory condition.

I have also examined the sample of water you gave me in a quart jar, in which had been placed, in July, 1886, two large pieces of lead pipe. This water does not contain any lead in solution.

Very truly yours,

T. M. DROWN.

EXTRACTS FROM THE REPORT OF THE SUPERINTENDENT OF WATER WORKS.

At our source of supply, Happy Hollow pond, there have been substantial cement retaining walls built on the sides of the pond, at a distance which will better protect it from pollution. This makes a good appearance, and keeps impurities out which would otherwise tend to enter the same.

Our distributing reservoir on the heights still maintains that efficiency which has marked its career since its completion, notwithstanding there were *some* who prophesied quite differently.

STATION No. 1.—The pumps at Station No. 1 have produced results this year that outdo all previous records. They have been run 338 days of 22 hours and 22 minutes each, pumping 899,052,732 gallons of water, and making an average duty of 124,512,184 foot pounds. For further particulars see report of engineer.

This station has been run to its fullest capacity, owing to the demands for water during the past season, as both stations could only pump 6,000,000 gallons a day, and during the warm weather the demand was from 5,000,000 to 6,500,000 gallons per day. The engine is apparently in as good condition as when it was first started, January 31, 1878.

STATION No. 2.—Station No 2 has been run to its full capacity. The water-wheels have been used to a larger extent than ever before, on account of the increased supply of water from Diamond Hill Reservoir.

We anticipate still better results for the coming year, when a larger wheel will replace the small one now in use, enabling us to run both pumps and pumping 3,000,000 gallons per day by water.

This station is in good condition, and has needed no special repairs during the past year.

Pumping Station No. 3 was built during the past year, and is now running. It consists of a main building of brick, 78 feet by 54 feet. The boiler house is 40 feet by 55 feet, all with slate roof except a small space on top. The chimney is 12 feet square at the base, with a 6 foot flue rising to a height of 125 feet.

This station was designed to contain, when fully equipped, three pumping engines each of the capacity of six million gallons of water in 24 hours, and the contract for the initiative plant was made on the basis that all parts of construction, which would be common to all, were to be furnished of sufficient size at first to accommodate at some future time two similar additional sets of machinery. The contract for the plant above described stipulates that the engine shall be "capable of delivering with ease 6,000,000 gallons of water in 24 hours into a force main 36 inches diameter and against a head of 270 feet." The engine is performing this work in a most satisfactory manner, running at 50 revolutions per minute.

This practically completes the buildings for pumping stations for Abbott Run stream, as when all the stations are filled with pumps according to their capacity, we can pump 27,000,000 gallons daily ; the capacity of the source of the supply, when properly stored, being 18,000,000 gallons, as estimated by competent authorities.

Connected with the new station is a filter gallery, 103 feet long and 20 feet wide. The overflow from this runs into three wells, and from them by 30-inch pipes into three pump wells.

The gallery is supplied with water by a 36-inch conduit from the dam, and is so arranged that the pumps can be fed with either filtered or unfiltered water. It is so arranged as to connect with the other 30-inch conduit line leading to the other two stations, thereby enabling us to feed either one or both from the new station, and also so that the old filter at No. 2 Station can feed all of them.

The filter gallery contains 2,060 square feet, and is filled to the depth of 18 inches with stone of various sizes in layers of 6 inches deep. There is also one foot of the best birch and maple charcoal. There is a grade of smaller stone used, down to the finest pea gravel 18 inches deep on top of the charcoal, making in all 3 feet of gravel and stone, and 1 foot of charcoal. Through this filter all the water has to pass before it enters the pumps. We believe this is a perceptible improvement over the old way of screens, as no fish spawn or small fish, eels or small sediment can pass the same, as has been practically shown to many parties that have visited our works to see for themselves.

HYDRANTS HAVE BEEN SET AS FOLLOWS :

1 on Brook street.
1 on Prairie avenue.
5 on York avenue.
5 in East Providence Division.
5 in Central Falls Fire District.
Total, 17.

SERVICES.

171	services have been made in Pawtucket.
40	" " " " Lonsdale and Valley Falls Division.
60	" " " " Central Falls Division.
35	" " " " East Providence Division.
3	" " " " Ashton Division.
309	
4795	as per last year's report.
5104	

During the year several services have been closed, and with those already reported leaves about 5084 in actual service.

METERS.

Two hundred and seventy-one services have been supplied with meters, as follows:

166 in Pawtucket.
28 in Lonsdale and Valley Falls Division.
15 in East Providence Division.
1 in Ashton Division.
61 in Central Falls Division.

The above added to those in use last year makes 3123. There have been about 25 discontinued during the year, leaving about 3098 in service.

RECEIPTS.

For water in Pawtucket	$59,578 83
For water in Lonsdale and Valley Falls Division	14,713 64
For water in East Providence Division	6,416 64
For water in Central Falls Division	12,793 43
For water in Ashton Division	416 47
	$93,919 01
Amount received for stock and labor performed	6,727 17
	$100,646 18

The above amount has been paid to the City Treasurer and the Superintendent has his receipts for the same.

RECAPITULATION OF RECEIPTS

Received for water from public use	$79,266 82
" " " hydrants	8,420 00
" " " Cumberland hydrants	1,980 00
" " " Central Falls Fire District	1,000 00
" " " Watchemoket Fire District	600 00
" " " private	620 00
" " " watering streets	690 00
" " " drinking fountains	540 00
" " " building permits, &c	491 70
" " " flushing and puddling sewers	310 49
	$93,919 01
Balance on hand December 1, 1887	6,518 50
	$100,437 51

RECEIPTS FOR WATER TO DATE.

Six months to April 1, 1879	$ 8,012 64
April 1, 1879, to April 1, 1880	23,395 68
April 1, 1880 to February 1, 1881, 10 months	34,080 54
February 1, 1881, to February 1, 1882	47,043 33
February 1, 1882, to February 1, 1883	56,788 90
February 1, 1883, to February 1, 1884	64,101 40
February 1, 1884, to February 1, 1885	70,223 64
February 1, 1885, to January 1, 1886, 11 months	60,481 76
January 1, 1886, to December 1, 1887, 11 months	79,013 25
December 1, 1886, to December 1, 1887	90,391 59
December 1, 1887, to December 1, 1888	93,919 01
Total amount received,	$627,451 74

Of this amount $381,691.69 has been transferred to the payment of interest, $22,000 to the sinking fund, $39,818.46 paid in rebates, and $183,940.88 has been expended for maintenance. A balance of 71 cents remains in the treasury.

Whole cost of works to date		$1,477,705 24
Bonded debt,	$500,000 00 at 5 per cent.	
Bonded debt,	600,000 00 at 4 per cent.	
Notes out,	377,705 24	
		$1,477,705 24
Amount of sinking fund due to the water works account		$240,000 00

I select from the engineer's report a few of the most important items so that they will be more noticeable:

Total number of gallons pumped during the year	1,554,238,516
Average daily consumption	4,258,187
Average daily consumption, last year	3,176,193

Contract price for coal, 1886–87	$3 70
Contract price for coal, 1887–88	4 43
Contract price for coal, 1888–89	5 35

36-inch	pipe laid	2,412	feet.
20-inch	"	5,013	"
16-inch	"	298	"
8-inch	"	1,513	"
6-inch	"	14,899	"
4-inch	"	2,948	"
2-inch	"	3,520	"

Total length of mains, 104+ miles.

FROM THE REPORT OF THE CHIEF ENGINEER—AMOUNT OF RAIN AND MELTED SNOW FOR THE YEAR ENDING NOVEMBER 30, 1888.

December, 4.97 ; January, 5 ; February, 4.70 ; March, 7.09 ; April, 2.78 ; May, 7.31 ; June, 1.48 ; July, 1.66 ; August 7.53 ; September, 8.81 ; October, 5.76; November, 8.56

Total rain and melted snow, 65.68.

Total depth of snow, 3 feet, .04 inches.

NUMBER ONE STATION.

Pumping expenses for the year ending November 30, 1888 :

935,623 lbs. of coal, at $4.43 per ton of 2000 lbs.	$2,072 04
731,987 lbs. of coal, at $5.35 per ton of 2000 lbs.	1,958 06
Oil, waste, packing, etc.	148 70
Repairs on engine	32 50
Repairs on boilers	50 53
Gas for lighting	542 70
Sundries	75 00
Salaries of engineer and firemen	3,312 37
Total	$8,192 26
Total number of gallons pumped	899,052,732
Cost of raising 1,000,000 gallons into reservoir	$9 11
Cost of raising 1,000,000 gallons one foot high	0 0337
Average number of gallons pumped per pound of coal	542.85
Average number of gallons raised 100 feet per pound of coal	1,463.25
Total number of days pumping	338
Total pumping time per day	22h 22m

NUMBER TWO STATION.

Pumping expenses for the year ending November 30, 1888 :

Steam Power.

645,553 lbs. of coal at $4 43 per ton of 2000 lbs.	$1,429 89
40,150 lbs. of coal at 3 74 per ton of 2000 lbs.	75 08
7,350 lbs. of coal at 4 00 per ton of 2000 lbs.	14 70
699,660 lbs. of coal at 5 35 per ton of 2000 lbs.	1,871 59
Repairs on pumps	172 51
Repairs on boilers	12 39
Oil, waste, packing, etc	265 33
Sundries	112 17
Salaries of engineer and firemen	2,241 75
Total	$6,195 41
Total number of gallons pumped	523,537,612

Cost of raising 1,000,000 gallons into reservoir	$11 83
Cost of raising 1,000,000 gallons one foot high	0 0433
Total number of days pumping	309
Average pumping time per day	16h 29m

Water Power.

5,210 lbs. coal, at $4 00 per ton of 2000 lbs	$10 42
10,900 lbs. coal, at 3 74 per ton of 2000 lbs	20 38
Repairs	25 50
Oil, waste, etc	60 00
Salaries	400 00
Total	$516 30
Total number of gallons pumped	131,648,172
Cost of raising 1,000,000 gallons into reservoir	$3 92
Cost of raising 1,000,000 gallons one foot high	0 0147
Total number of days pumping	116
Average pumping time per day	20h 15m

NUMBER ONE AND TWO STATIONS.

Total number of gallons pumped	1,554,238,516
Cost of raising 1,000,000 gallons into reservoir	$9 58
Cost of raising 1,000,000 gallons one foot high	0 0355
Average daily consumption of water in United States gallons	4,258,187
Total increase in gallons over last year	394,927,998
Average daily increase over last year	1,081,994

JOHN H. WALKER,
Chief Engineer of Pumping.

In concluding this, my ninth annual report, it is no more than just to the several employes to say they have performed their various duties with that ability which has helped to make our works what they are, many of them having been employed since they were began.

I desire also to thank his Honor the Mayor, City Council and the Hon. Board of Water Commisssioners for the confidence reposed in me, and trust I have merited the same.

All of which is respectfully submitted,

EDWIN DARLING, *Superintendent.*

WASHINGTON COUNTY.

CHARLESTOWN.

1. No work for the promotion of public health contemplated by the authorities during the year.

2. Water for drinking purposes taken almost exclusively from wells.

3. No public sewerage.

4. No new ordinances in relation to health.

5. No board of health beside the town council.

6. Health Officer, A. A. Saunders, M. D.

7. Gratuitous vaccination has been provided by the town council and performed by A. A. Saunders, M. D., at the district school houses—about 30 in 1000 vaccinated.

8. Undertakers *do not* send in their returns of deaths, they are obtained when school census is taken.

GEORGE C. CROSS, *Town Clerk.*

EXETER.

1, 2, 3, 4, negative replies.

5. Board of health, the town council.

6. Health officers, the town council.

7. No gratuitous vaccination provided.

8. Undertakers do not promptly send in their returns of death.

JOHN H. EDWARDS, *Town Clerk.*

HOPKINTON.

1, 2, 3, negative replies.

4. See ordinance appended.

AN ORDINANCE FOR THE SUPPRESSION AND PREVENTION OF NUISANCES.

It is ordained by the Town Council of Hopkinton, as follows:

SECTION 1. It shall be the duty of every health officer of this town to examine into the state and condition of every place and part of said town where such officers shall suspect or be informed that there exists any matter or thing which is or may become injurious to the health of the inhabitants thereof.

SEC. 2. Whenever it shall appear to the satisfaction of any health officer that there exists upon any premises owned or occupied by any person any dirt or offal, or any animal or vegetable matter, or the contents of any hog pen, cow-yard, barn, privy, drain or vault, injurious to health or the neighborhood, it shall be the duty of such health officers to cause the owner or occupant of such premises to be notified in writing of the existence of such nuisance or annoyance and to direct such owners or occupants forthwith to remove or abate the same; and if such nuisance or annoyance shall not be abated within forty-eight hours after such notice, such owners or occupants shall, for each and every day they suffer such nuisance or annoyance to remain after the notice aforesaid, be liable to pay a fine of not less than one dollar nor more than ten dollars.

SEC. 3. If such nuisance or annoyance shall not be abated by the owners or occupants of the premises where such nuisance or annoyance exists, at or before the expiration of the notice mentioned in the next preceding section of this ordinance, and if in the opinion of such health officers the expense of abating the same will not exceed ten dollars, then it shall be the duty of such health officers to authorize in writing the sheriff of the County of Washington, his deputies, or the town sergeant, or either of the constables, or police officers of said town, forthwith to cause such nuisance or annoyance to be abated. And the town council shall order the expenses thereof, not exceeding ten dollars, to be paid out of the town treasury of said town to the officer abating the same, which said expenses, so paid as aforesaid, shall be recovered from the party causing or continuing said nuisance or annoyance, in an action of debt in the name of the town treasurer of said town, before any court of competent jurisdiction.

SEC. 4. Whenever it shall appear to the satisfaction of any health officer that there exists upon the premises owned or occupied by any person any matter or thing injurious to the health of the inhabitants of any part of said town, or which, in his judgment, may originate or conduce to the spreading of any infectious or contagious disease, and that the expense of abating such nuisance or other cause dangerous to health shall be estimated at more than ten dollars, it shall be the duty of the health officer, as soon as the exigency of the case shall reasonably require, to report the same in writing to the town council, setting forth the particulars of such nuisance, and the probable expense of removing the same, as nearly as may be, and the owner or occupant of the premises upon which such nuisance or nuisances exist, or the person who may have caused, continued or permitted the said nuisance or nuisances, shall be forthwith notified to appear before the town council, at such time as the council shall appoint, to show cause, if any, why said nuisances shall not be abated or removed. And said council, upon satisfactory evidence to them submitted that said nuisance exists, may order the sheriff of said county, his deputies, or the town sergeant, or either of the constables or police officers of said town, forthwith to abate the same, and the expenses thereof shall be paid out of the town treasury, and be recovered from the party causing or continuing the same in the same manner as is prescribed in the next preceding section of this ordinance.

SEC. 5. This ordinance shall take effect immediately.

Attest: E. R. ALLEN, *Council Clerk.*

5. Board of health, the town council.

6. Health officer, John D. Kenyon, M. D.

7. Gratuitous vaccination has been provided during the past year. The proportion of the population vaccinated was probably all of school age.

E. R. ALLEN, *Town Clerk.*

NORTH KINGSTOWN.

1. Nothing particular.

2. No water service.
3. No public sewerage.
4. See new and revised ordinances below.

CHAPTER VIII.

AN ORDINANCE IN RELATION TO PUTTING FILTH OR RUBBISH ON THE STREETS AND HIGHWAYS.

SECTION 1. Every person who shall thrown or cause to run into or upon any public street or highway, side-walk, cross-walk or foot-walk, in any of the compact parts of this town, any filthy water, slops, or swill, shall pay a fine of not less than two dollars, nor more than ten dollars, for every such offense.

SEC. 2. Every person who shall put, place, throw, or deposit in any public street or highway in this town, except under the direction of the Surveyors of Highways, any ashes, soot, cinders, shavings, manure, old tin, iron, timber, wood, any oyster, clam, lobsters, or other shells, any bones, fish, animal, or vegetable matter, any dirt, dust, stones, or other matter or thing, shall pay a fine of not less than two dollars, nor more than twenty dollars, for such offense.

CHAPTER XI.

AN ORDINANCE IN RELATION TO SLAUGHTERING CATTLE AND OTHER ANIMALS.

SECTION 1. The Town Council of this town do hereby designate and appoint all that part of the town of North Kingstown laying without and beyond the limits of the Wickford Fire Corporation and without the compact parts of the other villages of this town, as the place where the business of slaughtering cattle and other animals may be carried on.

CHAPTER XIII.

AN ORDINANCE IN RELATION TO NUISANCES.

SECTION 1. Every person who shall put, place, throw, or deposit any dog, cat, sheep, or other animal into the waters surrounding or near any of the compact parts of this town, where it shall become or be liable to become an annoyance or nuisance to any of the inhabitants of said town, shall pay a fine of not less than two dollars nor more than twenty dollars, for every such offense.

SEC. 2. Every person who shall put, place, or deposit in any part of this town, any animal or vegetable matter which shall be or become a nuisance to any of the inhabitants of said town, shall pay a fine of not less than two dollars nor more than twenty dollars for every such offence.

CAPTER XIV.

AN ORDINANCE IN RELATION TO THE HEALTH OFFICER.

SECTION 1. It shall be the duty of the Health Officer of this town to make complaint for any violations of the provisions of the preceding chapter.

SEC. 2. Whenever it shall be made to appear to said Health Officer, that any person has put, placed, or deposited in any open lot, common, lane or highway of this town, or upon any of the shores therein, any animal or vegetable matter likely to injure the health of the inhabitants of said town or any portion of them, or by noxious air to annoy the neighborhood, said Health Officers shall forthwith give notice in writing to said person to remove said matter at once and abate said nuisance.

Sec. 3. If said matter be not removed and said nuisance abated within twenty-four hours after the receipt of said notice, said Health Officer shall issue his warrant to the Town Sergeant, Police Constable, or Constable of said town to remove and abate the same ; and the expense of said removal and abatement shall be paid by the Town Treasurer of said town, and afterwards recovered from the person putting, placing, or depositing said matter as aforesaid, in an action of debt, brought in the name of said Town Treasurer before any court of competent jurisdiction.

5. No legal board of health beside the town council.

6. S. O. Myers, M. D., was appointed, but has not qualified.

7. Gratuitous vaccination has not been provided during the past year.

8. Undertakers have not promptly sent in their returns of death.

George T. Cranston, John W. Page, Jr.

RICHMOND.

1. No unusual work for the promotion of public health, except by sanitary ordinance.

2 and 3, none.

4. See new and revised ordinance below:

AN ORDINANCE IN RELATION TO NUISANCES.

In Town Council, Richmond, August 11, 1888:

Section 1. Every person who shall put, place, throw or deposit any dog, cat, sheep or other animal into the waters surrounding or near any of the compact parts of this town, where it shall become, or be liable to become, an annoyance or nuisance to any of the inhabitants of said town, shall pay a fine of not less than two dollars nor more than twenty dollars for every such offence.

Sec. 2. Every person who shall put, place or deposit in any part of this town, any animal or vegetable matter which shall be or become a nuisance to any of the inhabitants of said town, shall pay a fine of not less than two dollars nor more than twenty dollars for every such offense.

Sec. 3. It shall be the duty of the Health Officer of this town to make complaint for any violations of the provisions of the preceding sections.

Sec. 4. Whenever it shall be made to appear to said Health Officer that any person has put, placed or deposited in any open lot, common, lane or highway of this town, any animal or vegetable matter likely to injure the health of the inhabitants of said town or any portion of them, or by noxious odor to annoy the neighborhood, said Health Officer shall forthwith give notice in writing to said person to remove said matter at once and abate said nuisance.

Sec. 5. If said matter be not removed and said nuisance abated within twenty four hours after the receipt of said notice, said Health Officer shall issue his warrant to the Town Sergeant, Police Constable or Constable of said town to remove and abate the same ; and the expense of said removal and abatement shall be paid by the said town and afterwards recovered from the person putting, placing or depositing said matter as aforesaid, in an action of debt, brought in the name of said town, before any court of competent jurisdiction.

True copy : H. P. CLARKE, *Town Clerk.*

5. Board of health, the town council.
6. Health Officer, A. H. Ecclestone, M. D.; P. O., Richmond Switch, R. I.
7. No gratuitous vaccination provided during the year.
8. There have been but two deaths registered in this office since June.

H. P. CLARKE, *Town Clerk.*

SOUTH KINGSTOWN.

No report from the town clerk.

WESTERLY.

No report from the town clerk of Westerly. Probably no new sanitary work contemplated or accomplished.

The following ordinances appended have been received by the secretary from different sources :

AN ORDINANCE IN RELATION TO CONTAGIOUS OR INFECTIOUS DISEASES.

It is ordained by the Town Council of the Town of Westerly, as follows:

SECTION 1. Whenever there is a case of scarlet fever, diphtheria, or any contagious or infectious disease in any house in the town, the Superintendent of Health shall in his discretion cause to be placed upon such house a card bearing the name of the diseases there existing ; and any person who shall remove such card except by permission of the Superintendent of Health shall upon conviction thereof pay a fine of not more than twenty dollars.

SEC. 2. No person shall retain, expose, or allow to be retained or exposed, the body of any person who has died of smallpox, diphtheria, scarlet fever, typhus fever or Asiatic cholera to the peril or prejudice of the life or health of any person.

SEC. 3. Any person who shall violate any provision of the foregoing ordinance, shall upon conviction thereof pay a fine of not more than twenty dollars ; and any undertaker who shall violate any provision of the foregoing ordinance, upon conviction thereof shall in addition to the above penalty be thereupon and thereby removed from the office of undertaker. A true copy,

Attest : WILLIAM HOXSEY, *Council Clerk.*

AN ORDINANCE FOR OBTAINING REPORTS OF DEATHS FROM CONTAGIOUS, INFECTIOUS OR EPIDEMIC DISEASES, PASSED JANUARY 6, 1888.

It is ordained by the Town Council of Westerly, as follows:

SECTION 1. Every physician having knowledge of the death of any person within the Town of Westerly, from any contagious, infectious or epidemic disease, upon whom he had been in attendance, shall immmediately make a report thereof, in writing, to the Superintendent of Health of said Town.

SEC. 2. Any physician, who shall fail to comply with the preceding section, shall be fined not more than twenty dollars for each day of such neglect after having knowledge thereof as aforesaid. A true copy.

Attest: WILLIAM HOXSEY, *Council Clerk.*

AN ORDINANCE DEFINING THE COMPACT PART OF THE TOWN.

It is ordained by the Town Council of the Town of Westerly, as follows:

SECTION 1. The territory included within the boundaries of School District No. 1, as said boundaries now are, is taken and deemed to comprehend the compact part of this town within the meaning of Chapter 80th, Section 3d, of the Revised Statutes of the State, and within the meaning of all the ordinances of this town, wherein reference is made to the compact part of the town. A true copy.

Attest: WILLIAM HOXSEY, *Council Clerk.*

AN ORDINANCE PASSED BY THE TOWN COUNCIL OF WESTERLY, ON THE 19th DAY OF MAY, 1888, TO TAKE EFFECT ON THE 1st DAY OF JUNE, 1888.

SECTION 1. No swine shall be kept within the limits of the compact part of this town, without a license therefor being first granted by the Superintendent of Health.

SEC. 2. All licenses to keep swine shall be for the current year, and shall terminate on the last day of December in each year, and shall be issued by the Superintendent of Health, and shall contain the condition that said license may be revoked at any time by said Superintendent.

SEC. 3. Every person who shall keep any swine within the limits of the compact part of this town, without first obtaining a license as aforesaid, or after notice that such license has been revoked as aforesaid, or who shall violate any of the provisions of this ordinance, shall pay a fine of not less than two nor more than twenty dollars. A true copy.

Attest: WILLIAM HOXSEY, *Council Clerk.*

5. No legal board of health beside the town council.
6. Health Officer, H. W. Rose, M. D.

REPORTS OF HEALTH OFFICERS.

In order to ascertain what degree of interest was taken in the work of sanitary inspection, and what had been accomplished in the different towns by the Health Officers of the same during 1888, the following circulars were sent at the close of the year:

CIRCULAR No. 73.

Office of Secretary of the State Board of Health.

Providence, Dec. 26, 1888.

To the Health Officer of

Dear Sir:—An important feature of the Annual Reports of the R. I. State Board of Health is that of giving a connected history of the occurrence of contagious and epidemic diseases from year to year, as they may have prevailed in the different towns, whether epidemically or in a less degree, together with the location in the town (village or otherwise), and season of the year.

If the proportion of the fatal cases to the whole number of cases of the same disease could be given, the value of such reports would be very much enhanced. Such proportion can be ascertained only in such towns as *by town ordinance* require physicians to report all cases of such diseases as come within their charge.

An approximate proportion can, however, be given, after the subsidence of the disease, by inquiry of persons living in the immediate neighborhood of the prevalence of such disease as to the number of the sick, or by house to house visitation where the sickness occurred, with same inquiry, and by the comparison of the deaths with recoveries as so ascertained.

Another feature of the Reports is a yearly record of the sanitary improvements made in the towns, in relation to water supply, drainage, abatement of nuisances, better methods of heating and ventilating public buildings, and such new ordinances as may have been adopted, having in view the improvement of the public health.

It is for the purpose of ascertaining such information that the questions in the inclosed circular are sent to the various Health Officers of the State.

If, therefore, you will have the kindness to reply to the questions in the said circular, according to the best knowledge you have been able to obtain, and forward in the inclosed stamped envelope, you will favor one of the most important interests of the State, and greatly oblige,

Yours truly,

CHAS. H. FISHER,

Sec. State Board of Health.

P. S. In the replies on the blank circular of questions, in relation to the extent or degree of prevalence of any disease, the following signs may be used: The star (*) preceding the name of any disease will indicate an epidemic prevalence; the sign plus (+), a large prevalence; and the sign equals (=), a moderate prevalence.

To Health Officers who are not physicians, it may be said that the term epidemic, within the meaning of the questions proposed, is the prevalence of some disease to the extent of one or more persons affected with the disease to every five to six persons living in adjacent tenements or in the near neighborhood, or a smaller proportion, not less than one case of the disease in every ten or twelve of the population, extending over a larger area of territory. One sick in every twelve to sixteen persons might be called a large prevalence, and one sick in every twenty to twenty-five, a moderate prevalence. The number of cases of any one disease may have to be estimated, but make them as nearly correct as possible.

C. H. F.

CIRCULAR No. 74.

Dear Sir :—Replies to the following questions, as suggested in the accompanying circular, (No. 73), are respectfully solicited ; said replies to be made on this circular, following each question :

1. Name of Town.

2. Name of Health Officer.

3. Have there been, within your knowledge, any epidemics, or any large prevalence of contagious or infectious diseases in your town during 1888 ? If so, of what disease or diseases ? in what locality or localities ? how many of each disease ?* and in what months of the year ?

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*According to the best knowledge obtainable.

Diseases.	Locality.	No. of Cases.	No. of Deaths.	Months in which they occurred.

4. Was isolation maintained or attempted ?*

5. What proportion of the sick, if any, were isolated ?

6. Was any inspection of premises made, where sickness prevailed, as to the sanitary condition of the cellars, pantries, sinks, sink-drains, water-closets, if any, cesspools, out-house privies, distance of wells from accumulations of filth, etc., etc.? If so, please give a general statement as to whether they were sanitarily in conditions, good or bad, or if any thing or place was unusually unsanitary, give a full description. Or if the cause of any outbreak of disease was found, please state what ?

7. Did you make any sanitary inspections during 1888, by order of the town council or from your own option ? If so, what were they and how made ?

8. Do you know of any location in your town that seems to be particularly unhealty to any considerable number of persons ? If so, and the cause is suspected, can such cause be removed at any reasonable expense ?

9. Do you report to your town council nuisances dangerous to the public health, or unsanitary premises within your knowledge ; or of buildings unsafe for occupants in case of fire ? (See Chapter 495, Section 6, Public Laws.)

10. Have you knowledge that any serious disease of domestic animals has largely prevailed in your town during the year ? If so, what disease or diseases, and in what locality ?

Have you a copy of the "Manual for the Health Officers of Rhode Island" at hand ? If not, one will be forwarded immediately, or more, if desired.

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*According to the best knowledge obtainable.

REPLIES OF HEALTH OFFICERS.

BRISTOL.

No report from the health officer.

1. WARREN.

2. Health Officer, Joseph M. Smith.

3. Not any very large prevalence of contagious or infectious diseases in town during 1888. The following diseases were the principal ones:

Typhoid fever, north and east parts of the town, 20 cases, 6 deaths, August, September and October. Diphtheria, central and north parts of the town, 8 cases, 3 deaths, July and September. Cholera infantum, 25 cases, 20 deaths, July, August and September.

4. Isolation was maintained.

5. Generally among Canadians in north part of town. There was a smallpox scare, one family isolated for a month, but no case of smallpox.

6. I made a general inspection of the town, had more than 1000 loads taken from privies, cesspools, &c., and twelve dead horses buried.

7. By order of town council, inspected the town generally, had the contents of privies, &c., removed, also pig-pens and filth of all kinds—used considerable quick lime.

8. The north part of the town, vicinity of the manufacturing company, was in bad condition, but they have built some 30 new houses and will be remedied.

9. I report all places I find in bad condition. The southerly portion of town is low and bad about drainage. There are four sewer pipes emptying in the docks; the outlets of these pipes are a great nuisance, as they are not carried far enough from shore and smell bad in the vicinity, along Water street. I have represented the case to the town council.

10. No serious disease of domestic animals has largely prevailed in town during the year.

BARRINGTON.

No report from the health officer.

1. COVENTRY.

2. Health Officer, John Winsor, M. D.

3. No very large prevalence of contagious or infectious diseases in town during 1888, except mumps—in town generally, many cases, no deaths, October, November and December.

4. No isolation was maintained or attempted.

5. No inspection of premises made where sickness prevailed as to the sanitary condition.

6. No sanitary inspections during 1888 by order of the town council or otherwise.

7. No location in town that seems to be particularly unhealthy to any considerable number of persons.

8. Do not report to town council nuisances dangerous to the public health.

10. No serious disease of domestic animals has largely prevailed.

1. EAST GREENWICH.

2. Health Officer, James H. Eldredge, M. D.

3. No large prevalence of contagious or infectious diseases, during 1888, except scarlet fever, in the village, below Main street and south King street, estimated near one hundred cases, 17 deaths, from February to November.

4. Isolation was maintained as far as practicable.

5. All were confined to their own houses until after desquamation and thorough cleansing of person and clothing.

6. No particular inspection of premises made where sickness prevailed as to the sanitary condition of the premises.

7. No sanitary inspections made during 1888 by order of the town council. No other epidemic than that named above.

8. Scarlet fever confined itself very much to the lower part of the town, but no exact rule seemed to control it.

9. Such conditions are reported.

10. No serious disease of domestic animals has largely prevailed.

WEST GREENWICH.

No report.

WARWICK.

No report from the health officer.

1. JAMESTOWN.

2. Health Officer, Abbott Chandler.

3. I know of but four deaths and those were not of contagious diseases.

6. No inspection of premises was made where sickness prevailed except in one case of scarlet fever, where everything about the premises was found in good order.

7. I made an inspection through the thickly settled part of the town, of cellars, cesspools, privy vaults, at my own option and reported to the town council those I thought were not in a sanitary condition.

8. I know of no place in town particularly unhealthy.

9. I do report to the town council nuisances dangerous to public health.

10. No serious disease of domestic animals has largely prevailed in town during the year.

LITTLE COMPTON.

No report.

1. MIDDLETOWN.

2. Health Officer, John Peckham.

3. No large prevalence of contagious or infectious diseases in town during 1888. Scarlet fever prevailed in the northeastern part of the town ; 6 cases ; 1 death ; April.

4. Isolation was maintained.

5. The proportion of the sick isolated were all, to a certain extent.

6. There were no particular unsanitary conditions, the disease was brought by outside parties, and did not spread, from the families. No cause on the premises was found for the disease.

7. I did make inspections from my own option, mostly in regard to the swill nuisance which I am glad to say is at an end. No complaint was made to me of any nuisance. Slaughter house nuisance stopped.

8. Do not think there is any location particularly unhealthy.

9. When I find any nuisance I attend to it and see that it is abated at once. Report to the council once a year.

10. No serious disease of domestic animals has largely prevailed in town during the year, although many cows have died of milk fever. It seems to increase from year to year, always takes the best cows—they are sure to die.

NEW SHOREHAM, PORTSMOUTH and TIVERTON.

No reports.

1. BURRILLVILLE.

2. Health Officer, Herbert F. Mowry.

3. There have been no epidemics nor any large prevalence of contagious or infectious diseases in the town. There were a number of cases of typhoid and scarlet fevers, but neither appeared epidemic in character, and but few deaths were resultant therefrom.

4. Isolation was maintained. In some cases of typhoid and scarlet fevers the patients were isolated and those who had been exposed to the diseases were quarantined until all danger was past. In cases where those who had been exposed were dependent upon daily labor for a livelihood the town paid them for the time they were kept quarantined.

6. There was no rigid inspection of premises made as none of the cases seemed to require it.

7. From instructions of the council and from my own option I examined and ordered abated a number of sink drains and other nuisances during the year.

8. No location in town that seems to be particularly unhealthy to any considerable number of persons.

9. I report to the town council nuisances and unsanitary premises whenever the occasion seems to demand.

10. Have no knowledge that any serious disease of domestic animals has largely prevailed in town during the year.

CRANSTON.

No report from the health officer.

CUMBERLAND.

No report from the health officer.

EAST PROVIDENCE.

No report from the health officer.

1. GLOCESTER.

2. Health Officer, G. A. Harris, M. D.

3. No large prevalence of contagious or infectious diseases in town during 1888.

7. No sanitary inspections during 1888, by order of the town council; only in the line of professional business with no expense to town.

8. Do not know of any location in town that seems to be particularly unhealthy.

9. Do not know of any nuisances dangerous to the public health.

10. Have no knowledge that any serious disease of domestic animals largely prevailed during the year.

1. JOHNSTON.

2. Elmer S. Fiske, Sec. Board of Health.

3. There was a considerably large prevalence of contagious or infectious diseases during 1888. Scarlatina, easterly portion of the town, mostly; 1 case reported; no deaths reported. Typhoid fever, easterly portion of the town, mostly; 4 cases reported ; no deaths reported. Diphtheria, easterly portion of the town, mostly; 5 cases reported ; know of but one death. It is but recently that we have required all cases of contagious diseases to be reported, but hereafter will be able to make fuller reports. Diseases named have been most prevalent during November and December.

4. General isolation was not maintained or attempted.

6. Inspected premises of all cases reported, a few were found in an unsanitary condition, (cellars, privy vaults and yards), and the owners notified and the nuisances abated in every case, but one, which was a case of diphtheria, where the privy vault needed cleaning out but the owner was advised to wait until the case recovered before stirring it up, and in the meantime use disinfectants.

7. Have inspected and ordered the abatement of a number of nuisances ; sink drains, privy vaults, &c. One case where manure was being piled up on land

to leave through the winter, (from hog pen) in close proximity to residence and not properly covered—had it removed. In three cases have stopped the depositing of night soil on land in dangerous proximity to houses.

8. What is called "the swamp," to the southwest of Olneyville Square, near the Springfield R. R., is a very unhealthy locality and undoubtedly the cause of much sickness, especially malaria. Know of no way it can be abated.

9. Do not report them to council—order them abated and see that they are attended to. Reported to council the necessity of the removal of swill from the compact part of the town, and steps are being taken so that very soon it will be regularly removed and families will be required to furnish suitable receptacles for their swill, and stopped from throwing it into their privy vaults, as has been done in the past in a large number of cases.

1. LINCOLN.

2. Health Officer, A. A. Mann, M. D.

3. No very large prevalence of contagious or infectious diseases during 1888, unless malarial diseases be excepted.

7. Did make some sanitary inspections during 1888. Found drainage of contents of cesspools through the walls of cellars.

8. Do not know of any location in town that seems to be particularly unhealthy to any considerable number of persons.

9. Nuisances dangerous to the public health, and unsanitary premises, are reported.

10. No serious disease of domestic animals has largely prevailed within my knowledge during the year.

NORTH PROVIDENCE.

No report from the health officer.

1. NORTH SMITHFIELD.

2. Health Officer, Joshua Wardle.

3. Scarlet fever: Slatersville, 53 cases, 9 deaths; in Waterford, 5 cases, no deaths; outside of villages, 4 cases, 1 death—62 cases, 10 deaths. A large majority of cases during May and June.

4. Isolation was maintained.

5. Nearly all were isolated.

6. At Slatersville, sink drains and out-house privies rather bad early in spring, improved later.

7. Sanitary inspections were made during 1888 by order of the town council and also from my own option. Yes, both by order and choice. A general inspection through the village of Slatersville around houses, rivers, sink drains, cesspools, cellars, &c.

8. Do not know of any location in town that seems to be particularly unhealthy to any considerable number of persons.

9. Report is made to town council of nuisances dangerous to the public health.

10. No serious disease of domestic animals has largely prevailed in town during the year.

PAWTUCKET.

No report from the health officer.

1. PROVIDENCE CITY.

2. Health Officer, Charles V. Chapin, M. D.

3. There was considerable prevalence of the following: Scarlet fever, general, 361 cases, 80 deaths, through the year. Diphtheria, general, 230 cases, 98 deaths, through the year. Typhoid fever, scattered, due to Pawtuxet water, 403 cases, 103 deaths, mostly in autumn.

4. The attempt was made by the health department to secure isolation in all cases.

6. All cases received thorough sanitary inspection of the whole premises and surroundings.

9. Nuisances dangerous to public health, and unsanitary premises, are reported promptly.

10. No serious disease of domestic animals has largely prevailed during the year.

THE FOLLOWING EXTRACTS ARE FROM THE REPORT OF THE SUPERINTENDENT OF HEALTH, PROVIDENCE CITY.

There were no deaths from small pox in 1888, nor has there been but one since 1875.

The following tables give the statistics of the prevalence of scarlet fever, typhoid fever and diphtheria for the last five years:

SCARLET FEVER.

Year.	Cases.	Deaths.	Rate of Mortality.
1884	538	57	10.59
1885	383	38	9.92
1886	237	30	12.65
1887	848	153	18.04
1888	361	80	22.16

TYPHOID FEVER.

Year.	Cases.	Deaths.	Rate of Mortality.
1884	122	52	42.62
1885	87	44	50.57
1886	104	53	50.96
1887	66	39	59.09
1888	403	103	25.55

DIPHTHERIA.

Year.	Cases.	Deaths.	Rate of Mortality.
1884	193	58	30.05
1885	146	37	25.34
1886	322	98	30.43
1887	307	109	35.50
1888	230	98	42.61

* * * * * * * * * *

In my last report I gave certain interesting statistics in regard to the cases of scarlet fever which occurred during the latter half of that year so far as they could be followed up before my report was presented. I have collected similar data for the year ending December 31, 1888, and give them below in addition to and in comparison with those of the previous year:

	1887.	1888.	Total.
Number of families in which there was more than one susceptible child	232	244	476
Number of these in which there was no second case	102	97	199
Number of susceptible children in all the above families	986	827	1,813
Number of these children who were attacked	452	511	963
Number of additional families with susceptible children in the same house where the disease appeared	112	128	240
Number of susceptible children in these families	381	354	735
Number of these additional families attacked	27	16	43
Number of children in these families attacked	58	21	79
Number of families where inunction was practiced	87	99	186
Number of instances in the above families where the disease was not confined to one case	44	64	108
Number of susceptible children in these families	218	496	714

Number of these children who were attacked	148	319	467
Number of tenements which were fumigated	51	63	114
Number of instances where fumigation was done, and where the disease spread to other families in the house	5	5	10
Number of instances where susceptible children were at once removed	24	18	42
Number of instances where they were attacked on their return	3	1	4

NOTE.—The figures for 1887 do not include all the cases occurring in that year, but only such as could be followed up at the time my report was written. Two months is allowed to elapse before the family account is considered closed. The present report, however, was so delayed that the figures for 1888 includes all the cases reported that year.

In the four cases where children who had been removed at the inception of the disease were taken sick on their return, they were absent from four to five weeks, and were attacked within two or three days after their return. In the other cases the absence continued for from four to six weeks in the majority, but was less than that in some instances and greater in others. In examining these tables it will be seen that there is not much difference between the figures for 1887 and 1888. We may, I think, fairly infer from them that when a child is exposed to scarlet fever in its own family, its chances of escaping or contracting the disease are about even.

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The following table shows the number and proportion at different ages of 854 persons who were attacked by scarlet fever :

Age.	Cases.	Number per thousand of all exposed.	Number per thousand of population of each age.
Under 1 year....	21	220	8.96
1	27	360	19.4
2	86	550	33.2
3	86	540	37.9
4	83	600	36.5
5	71	420	31.4
6	83	580	36.6
7	80	610	34.8
8	61	480	28.1
9	55	470	25.7
10	35	450	15.2
11	37	450	17.7
12	24	320	10.4
13	20	300	10.3
14	15	280	7.2
15	12	230	5.8
16	9	280	4.0
17	5	200	2.2
18	1	100	.4
19	3	230	1.3
20	4	400	1.7
Adults..........	36	690	

The figures indicate that scarlet fever is most likely to attack children between the second and eighth years, over fifty-seven per cent. being between these ages, and that after the fifteenth year there is little liability of a person contracting the disease.

During 1888 diphtheria caused 98 deaths, exactly the same number as in 1886, and 9 less than in 1887. It has prevailed during the past three years with about the same intensity. From what I have observed of this disease in this city, it seems to be propagated entirely to contagion. I have failed to notice any connection with defective plumbing or drainage or collections of decomposing organic matter.

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VACCINATION.

During the year 1888 the number of persons vaccinated was 894, making the total number of persons vaccinated by the health department since 1856, 50,135. The only public vaccination has been at the City Hall on Saturday afternoons. Humanized virus only is employed. The number of transfers in 1888 was 29, making the total number of transfers since 1868, when an accurate record was begun, 299. The number of certificates of vaccination issued was 1,676, which makes the total number issued since 1856, 45,401.

SWILL.

Messrs. A. E. Field & Son have continued to collect the swill from the residences of the city in the same satisfactory manner as they have done for many years. The payment for this work has, however, owing to their representations of the increasing expense of the business been made $14,500 per annum, instead of $12,000, which they received previous to April, 1888. The contractors decline, however, to continue the business any longer even at this rate. $24,000 per annum they say is the lowest figure at which they can afford to do the work. If they hold to this figure, and it is impossible to make a more favorable contract with others, it is certainly the part of wisdom for the city to purchase the plant and conduct for itself the work of removing the swill and garbage not only from private residences, but from all premises in the city where it may accumulate.

The number of complaints made at this office in 1888, in regard to the removal of swill was 299, as against 329 in 1887.

The number of special permits granted in 1888 to parties to remove swill from hotels and restaurants was 17. In 1887 it was 15.

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NIGHT-SOIL.

No change has been made in the mode of removing night-soil. The number of licenses granted to scavengers in 1888 was 117. The year before it was 157. Each year less and less night-soil is removed by farmers, and more and more by men who make this work their sole means of livelihood. In most cases they are extremely unreliable, and require constant watching, and now and then arrest and prosecution to prevent their using leaky tubs and boxes and dumping in forbidden localities. They are often dishonest and ready to take advantage of those who are obliged to employ them. It is manifestly impossible for this department, with its single inspector, to follow them up closely enough to ensure even reasonable care on their part, and during the summer season complaints in regard to the filthy condition of the tubs and wagons are very numerous.

I have before called the attention of your board to the fact that this work could be done much more satisfactorily to the citizens if taken in hand by the city, and that the cost, though very great, would be much less than the aggregate now paid the scavengers.

The ultimate disposal of the night-soil is a problem not easily solved. For obvious reasons it has become necessary to restrict the practice of dumping in the city, to one or two farms in the tenth ward. The great bulk of the night-soil has to be carried into the neighboring towns. Last summer these towns began to protest against being made a dumping ground for the cities refuse, and Johnston, Cranston and East Providence forbade the carrying of night-soil through or the dumping within their limits. Though their restrictions were only in force during July and August, they caused much annoyance in Providence. At first I granted permission to deposit night-soil at several additional points within the city limits, but this speedily created so great a nuisance that it had to be stopped. We shall, I think, have to establish a depot in the centre of the city, where this material can be loaded on to cars and taken out of town in that way. This would create much less nuisance than the present custom of transporting it long distances through such streets as Greenwich, Broad and Academy avenue. The city should provide a turnout and shed, and a man to take charge of it, and should compel the scavengers to pay so much per load deposited there—enough to pay the costs of transportation into the country, where farmers would be glad to take it for nothing—but would not, I fear, be willing to give anything for it, notwithstanding its value as a fertilizer.

NUISANCES.

During the year one inspector only was employed to look after nuisances. As it is the duty of this officer to keep a constant supervision of all the decidedly unsanitary districts of the city, and to visit at least once each summer every estate where there is any likelihood of there being a nuisance, and wherever a nuisance is found to revisit the premises often, several times until it is abated, it will be seen that his task is no easy one. The marked improvement which is shown in the sanitary condition of the cheaper class of tenements and their surroundings shows how faithfully this work has been done.

During the year 403 complaints were made at this office in regard to nuisances. Of these, 332 were well founded, 71 were not. Usually the number of unreasonable complaints, evidently dictated by spite or a disposition to make trouble, is much greater. In addition to these complaints, 166 were received through the police, making in all 569 complaints from the public, and requiring attention. The nuisances abated during the year were as follows :

Privy-vaults full and offensive	1,203
Cesspools full and offensive	196
Defective vaults and cesspools	64
Uncovered vaults and cesspools	44
Cesspools and vaults leaking on to adjoining estates	36
No vault to privy	2
No cesspool on estate	10
Cesspools and vaults leaking into cellar	57
Defective waste and drain pipes	416

No traps	292
Filthy yards	367
Filthy water flowing into the streets	40
Defective water closets	32
Filthy cellars	103
Privy-vaults removed	6
Tenements cleaned:	4

When a nuisance exists on any premises in the city, a letter is at once sent to the owner to abate it, and if he does not do it within a reasonable time the case is reported to your board for action. In 1888 your board issued 351 orders under form A, to abate nuisances, and 42 under form C, to vacate tenements. When your board is not in session, I have authority, under Chapter 495 of the Public Statutes, to issue such orders, and during the year 120 were issued from this office.

There is one serious defect in this statute governing nuisances. It is impossible at present to secure the abatement of a nuisance unless the owner is known and resides within the city. When the ownership of an estate has not been decided upon by the courts in cases involving litigation, or when owners are non-resident, the law provides no remedy, no method for securing the abatement of the nuisance. Unfortunately it is just this sort of property which is liable to be neglected and give rise to nuisance. It is very important that the law should be modified so as to deal effectively with these cases.

As usual there were more nuisances attributed to privy vaults than to all other causes combined, and this will always be the case so long as they are allowed to exist. I have hitherto in my annual reports and elsewhere continually urged the advisability of at once getting rid of all privy-vaults and cesspools on the line of sewered streets. And so long as a single one of these vaults remains I shall continue to protest against it. They are a standing disgrace to this and every other sewered city that tolerates them.

WATER SUPPLY.

The only public water supply of this city is from the Pawtuxet river. The general character of the region from which this water is drawn is well known to all. The drainage area is about 192 square miles, and contains from 18,000 to 20,000 people. The majority of these are collected in the manufacturing villages directly upon the banks of the river. It is evident that the chances for pollution are very great. Until a very recent period there were scores of privies placed directly over the river and used by thousands of persons daily. The spent dye from large print works, and the refuse from bleacheries and woolen mills found their way without let or hinderance into the river. Of course the surface water from the streets of the mill villages and the sink drains from the tenements also discharged directly in the same way. Besides these permanent sources of contamination, the washings from freshly manured fields, from barnyards and pig-styes occasionally added their pollution, and the dwellers along the banks found the stream a convenient receptacle for dead animals, slops and other refuse. Nevertheless, the volume of water is so large—115,000,-

000 gallons per day at the minimum—that the pollution has never been indicated by any gross chemical contamination. In fact, as shown by the special report of Prof. Appleton in 1883, as far as chemical tests go, it ranks well among the public water supplies of the United States.

But as stated by Prof. Appleton, chemical testimony should not outweigh the facts gleaned by inspection of the stream itself, and hence the Board of Public Works took measures to secure the removal of every possible source of pollution, believing that thus only could absolutely safe water be secured for the use of our citizens. These efforts were extended over several years, and resulted in removal of every privy which was directly over the river, and of most of the sink drains and similar sources of contamination. Some effort was make by the mill owners, particularly of the Clyde Print Works, to limit the amount of manufacturing refuse which was discharged into the river, but as there is much less danger to health from this than from excremental matter, the necessity for such efforts was not so strongly urged. Notwithstanding the efforts of the Board of Public Works, I found when, together with a member of the board, I inspected the river in December as far up as Hope and Centreville, that there were a number of places where the stream might, and in fact.somewhere it was, receiving material from broken or poorly constructed vaults, sink drains and cesspools. Now it is certain, as shown in another portion of this report, that water contaminated in this way may at any time be the cause of disease and death. It is also plain that the efforts which have thus far been made in the direction of purification have not been adequate to secure the desired result. There are to-day scores of sources of pollution on that river which can and should be removed. After they are done away with others will take their places, unless a constant supervision is kept up. I have in previous reports called attention to the need of more earnest endeavor on the part of the city to protect its water supply from pollution, and it is to be hoped that this need, emphasized as it is by disease and death will now receive the recognition which it deserves.

But after all that can be done to keep dangerous material from getting into the Pawtuxet river, it is not probable that danger from this source can ever be entirely avoided. It must be expected that pollution will occasionally occur in a stream flowing through such a thickly settled district, no matter how closely it may be watched. We therefore anxiously inquire whether or not there is any process by which water can be artificially purified so as to render it perfectly safe for drinking purposes? The experiments made by the Medical Inspector, Dr. Swarts, and referred to in my last report, showed conclusively that the domestic filters in common use in this city were worse than useless, that they increase rather than diminish the number of disease germs in the water which passes through them. Dr. Swarts has since then examined the Pasteur, Gate City and Cheney filters. The former does all its inventors claim. It perfectly removes all organisms—pathogenic or non pathogenic—from the water. It is in constant use in the laboratory to furnish water entirely free from all germs, and it is found to remain effective for an indefinite period. The Gate City filter also removes all organisms for a time at least, but Dr. Swarts does not think that it can be relied upon for a very long period. The Cheney filter is, he says, not capable of removing the organisms, and is made in such a way that it is very liable to get out of order.

In regard to the purification of water on a large scale by the city before it enters the mains, it has not yet been clearly demonstrated that it can be done. Prof. Frankland has shown that the methods of filtration employed by some of the London water companies removes as many as 98 per cent. of the organisms. In this country there are several companies which offer for sale patent purifying apparatus depending on precipitation and filtration. Prof. Leeds, of the National Company, claims that these filters, as now in operation at Antwerp, will remove all the organisms from water. The Hyatt Company present analyses which show that their process will remove 75 per cent., or over, of the germs. It is very probable that some of these processes are able to practically free river water from all danger due to the presence of living organisms. The question is not, however, one to be decided off-hand. It should receive the most thorough investigation, and it seems to me that the time has come when it may be undertaken with chance of success.

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PAWTUXET WATER ANALYSES FOR 1888.

Two analyses were made each month.

The figures signify parts (in weight) in one million parts of water (in weight).

MONTHS.	Total Residue.	Mineral Matter.	Organic and Volatile Matter.	Common Salt.	Albuminoid Ammonia.	Ammonia.
January	59 50	40 37	19 13	4 17 3.57	.30 .22	.06 .04
February	42 39	28 24	14 15	4.46 3.57	.20 .18	.06 .06
March	36 30	22 16	14 14	2.38 3.27	.16 .16	.01 .04
April	26 24	14 16	12 8	2.08 2.08	.16 .14	.02 .02
May	31 35	17 18	14 17	3.87 2.68	.18 .24	.02 .06
June	37 51	19 21	18 30	3 27 3 43	.22 .22	.04 .05
July	44 42	28 25	16 17	5.62 3.74	.22 .16	.10 .14
August	43 41	22 25	21 16	4 37 3,74	.20 .20	.08 .06
September	50 49	29 28	21 21	3.12 3.43	.22 .24	.06 .06
October	41 43	21 24	20 19	3.12 3.43	.20 .18	.04 .00
November	43 48	25 26	18 22	4.05 3.43	.20 .18	.04 .04
December	31 40	20 23	11 17	3.12 3.74	.14 .16	.02 .06

The following biological examinations were made on the 1st and 15th of each month by Dr. Swarts and myself in the laboratory in the City Hall :

MONTHS.	Pawtuxet River.	Sockanosset Reservoir.	Hope Reservoir.	High Service.	Low Service.
January	110 95	284 40	21 5	11 20	39 14
February	6,216 279	483 341	0 10	117 99	10 46
March	136 190	110	3 11	16 30	219 91
April	197 203	....	29 32	40 50	64 100
May	610 560	 22	11 12	48 14	110 Liquified.
June	900 2,550	....	37 17	200 21	352 320
July	410 1,817	....	10 30	169 57	2,000 420
August	2,143 1,355	 2,522	20 71	147 135	216 288
September	2,512 593	330 78	56 59	90 14	416 230
October	125 188	60 60	24 44	33 35	253 53
November	209 398	126 133	35 43	20 37	113 97
December	470 181	560 168	13 28	43 5	500 67

These analyses show that the Hope reservoir furnishes much purer water at the taps, both of the high and low service, than is to be found in the river itself or in the Sockanosset reservoir. The water is apparently purified by standing as it does in the Hope reservoir for many weeks. The water under such conditions does not furnish a suitable place for the growth of the germs and they rapidly die. They die in the mains as well as in the reservoir, for samples of water taken from various parts of the low service—Sockanosset supply—show a marked diminution of organisms as compared with water from that reservoir. The low service at the City Hall, from which the samples in the table were taken, shows a much larger number of organisms than do other taps in the same part of the city. This is explained by the large size of the pipes allowing a collection of sediment and the retention of a considerable amount of water in a warm building.

It was found that in a general way the number of organisms increased with the temperature, vice versa. The number in the river water was diminished by floods and high water.

While I believe that important results may be arrived at by both chemical and biological analyses, I do not think that either can be relied upon to determine positively whether or not a water is fit to drink. Chemical analysis has many times shown that water was contaminated with sewerage or fæcal matter, and therefore dangerous, and a biological analysis may detect the same. But when the volume of water is very large and the dilution of the poison very great, both methods may fail to detect it. Chemistry cannot determine the presence or absence of these minute and dangerous forms of life, and the biological method, the steps of which are too complicated to be detailed in this connection, of necessity deals with such small quantities of water that it may entirely miss the particular organisms sought unless an enormous number of cultures are made, and even then the time consumed may result in a fatal delay, as it undoubtedly would last November, even if the most thorough analyses of the water had been undertaken at the time it was first polluted. Nevertheless it would be extremely desirable to have both the chemical and biological analyses of our water continued, and I regret that I cannot personally give the time which is necessarily required by the work of bacteriological examination. Chemical and biological investigation and direct inspection should supplement one another, and in the majority of cases I believe that the fitness or unfitness of a water could be thus determined.

C. V. CHAPIN,
Superintendent of Health.

REPORT OF THE MEDICAL INSPECTOR, 1888.

The number of cases of such contagious diseases as receive the attention of this department are as follows :

	Typhoid Fever.	Scarlet Fever.	Diphtheria.	Totals.
Number of premises inspected..........	389	286	192	867
Extra number of cases occurring on the same premises......................	14	75	38	127
Total number of cases....................	403	361	230	994
Cases not reported.......................	4	29	50	83
Change of diagnosis......................	....	5	6	11

TYPHOID FEVER.

The unusual prevalence of this disease during the commencement of the winter calls for an analysis of the conditions which were found in common with a majority of the patients.

As is customary with each medical inspection, all the conditions to which the patient may have been exposed are inquired into. These conditions, when placed together for comparison during the epidemic of typhoid fever, show the following results :

Neither age, nor sex, nor color, was exempt.

No occupation seemed to have a larger number of cases ascribed to it except school children. This may be accounted for by a larger number of adults having had the disease than younger persons, or by the depression of the whole system, which is a natural result of confinement in ill-ventilated and over-heated school rooms.

As to location or residence, the concentration of cases, especially those appearing during the commencement of the epidemic, appeared to be above the crest of the hill, on the west side, and within the old fifth and sixth wards. But later the cases were very evenly distributed over the city.

Exposure to the disease occurred as far as known only in houses where other cases existed and where other members of the same family were affected. As this can be brought about only by the ingestion of the product which induces the disease, the recurrence of the disease can be accounted for either by the fact that the second cases occurring were subject to similar conditions as the first, or as is probable when the nurse of the patient is affected, that contamination of food, eating utensils, or of the hands themselves has occurred, the latter being readily soiled by care of the patient.

Unsanitary conditions upon the premises where cases occurred were comparatively few.

In many cases persons coming from other localities outside the city came here somewhat "run down," but did not give up to typhoid fever under two weeks or more. There appeared to be no four cases supplied by the same milkman. The study of an epidemic of this kind brings out the fact that there are some one hundred and fifty different sources of milk supply. The only thing that seems to have been in common was the water supply. In all of the 254 cases occurring during November and December, only three had a well supply as the only source.

One other interesting point is to be observed—the time when the cases occurred, as will be seen by the following statement :

Of the 403 cases of the year, 254 occurred during the months of November and December.

The commencement of the active epidemic was about the 23d of November. Its height was on December first, when 28 cases were reported as taken sick, and its complete subsidence on December 21st. By far the greatest number of cases, however, occurred between November 24th and December 11th, making 179 cases, or over 70 per cent. of those occurring in November and December.

It is unusual for an epidemic of this kind to have so marked a course. Whether the subsidence may have been caused by a cessation of contamination of the water supply, or whether the boiling of water as a result of the early admonition of the Health Department, it may be difficult to determine, but probably from both.

Filters were found upon the faucets in many cases. The attention of the public has been called to the dangers of these retainers of filth in previous reports.

I would at this time suggest to the department a more careful consideration of the milder forms of contagious diseases, such as chicken pox, measles and whooping cough, which, while not producing death, yet produce a great amount of suffering, annoyance and expense to those families having children in schools.

By the reporting of these diseases by physicians and teachers, and a control of the return of those children excluded, by means of permits, the amount of these diseases to a certain extent might be reduced.

GARDINER T. SWARTS,
Medical Inspector.

1. SCITUATE.

2. Health Officer, W. J. Smith, M. D.

3. No epidemics, or any very large prevalence of contagious or infectious diseases during 1888, except as follows: Diphtheria, general distribution, few cases; no deaths. Whooping cough, North Scituate, large number of cases; no deaths; early part of year. Mumps, North Scituate, large number of cases; no deaths; spring and summer.

4. Isolation was maintained in diphtheria.

5. Nearly all cases of diphtheria were isolated.

6. Several inspections of premises where diphtheria occurred were made, but no definite source of ill-health was found.

7. No inspections were made in the capacity of health officer, but only as attending physician.

8. No location in town that seems to be particularly unhealthy to any considerable number of persons.

9. Would report to town council nuisances dangerous to the public health, if any.

1. SMITHFIELD.

2. Health Officer, Jenckes Smith.

3. No epidemics or large prevalence of any diseases in 1888. So far as I know there have been in 1888 only two or three mild cases of Scarlet fever.

6. No sanitary inspections made during 1888.

8. No location in town that seems to be particularly unhealthy.

9. Report will be made to the town council of nuisances dangerous to the public health, if known.

10. No serious disease of domestic animals has largely prevailed.

1. WOONSOCKET.

2. Health Officer, Geo. W. Jenckes, M. D.

3. There was a considerably large prevalence of the following contagious or infectious diseases during 1888: Scarlatina, generally distributed, 150 cases; 60 deaths; from Nov. 1887 through the winter and spring of 1888. Diphtheria, generally distributed, 26 deaths. Typhoid fever, generally distributed, 15 deaths.

4. Previous to my taking office in June, '88, families were quarantined but patients were not isolated. My practice is to thoroughly isolate the patient—since June, 19 cases of scarlet fever have been reported, none fatal.

6. Very little attention has been paid to general sanitary conditions for two

years previous to June, 1888. Officials hardly recognize, even after experience, the great need of sanitary regulations.

7. Many sanitary inspections were made during 1888 under my appointment, in all parts of the town as to location of sink drains, cesspools, privy vaults and wells, and also as to condition of cellars—of which many are wet from natural drainage and leakage of cesspools—none ventilated—general condition very bad.

8. The thickly settled portions of the town are all in bad sanitary condition.

9. I make report to the town council of nuisances dangerous to the public health, and all unsanitary premises within my knowledge.

10. No knowledge of any serious disease of domestic animals in this city during the year.

1. CHARLESTOWN.

2. Health Officer, A. A. Saunders, M. D.

3. No large prevalence of contagious or infectious diseases in town during 1888.

6. Have had no occasion to make inspection.

8. No location in town particularly unhealthy.

9. No nuisances dangerous to the public health within my knowledge.

10. No serious disease of domestic animals.

EXETER, HOPKINTON, NORTH KINGSTOWN, SOUTH KINGSTOWN, NARRAGANSETT and RICHMOND.

No reports from Health Officer.

1. WESTERLY.

2. Health Officer, H. W. Rose, M. D.

3. No epidemics, or any large prevalence of contagious or infectious diseases in town during 1888.

6. No particular inspections of premises were made, except as in question seven.

7. The sanitary inspections made during 1888 were only privately and from my own option, and advisory to parties. In the majority of cases the unhealthy conditions were removed.

8. No location in town seems to be particularly unhealthy.

9. I report to the town council nuisances dangerous to the public health when known.

10. No serious disease of domestic animals has largely prevailed.

METEOROLOGY.

It has been remarked in previous reports of the Board that the influences of the conditions of the atmosphere upon disease are recognized and acknowledged by all pathologists, and the following tables are therefore introduced, as heretofore, for the purpose of comparing the large prevalence of certain diseases at different periods of the year, with the temperature, the barometric pressure, the relative humidity, prevailing direction of the wind and other conditions of the atmosphere. and also the amount of rainfall during each month of the year. The said diseases may be found in the reports upon the registration of deaths by months, table VII, Registration Report.

The first table is compiled from the. monthly reports of the City Engineer of Providence, and shows the mean, maximum and minimum temperature of the different months, and the extremes and average daily ranges of the same, the rainfall and prevailing direction of the wind.

The second table will give a more comprehensive monthly summary of observations during 1888, including a larger number of atmospheric conditiions for each month, and also yearly summaries for each of the four preceding years.

It is condensed from the annual summary of monthly observations at Hope Reservoir and the City Hall.

The meteorological observations taken on Block Island are furnished by the courtesy of the officers of the Signal Office, War Department, Washington, D. C.

TABLE I.

Temperature, Rainfall and prevailing direction of the wind, for each month during the year 1888.

MONTHS, 1888.	TEMPERATURE.							Total amount of Rain or Melted Snow in inches.	Prevailing Direction of the Wind.
	Monthly Mean.	Maximum.	Minimum.	Monthly Range.	Greatest Daily Range.	Least Daily Range.	Average Daily Range.		
January	21.0	56.5	—5	61.5	36.	5.0	15.7	4.63	N. W.
February	29.5	53.5	.0	53.5	38.	6.	16.5	4.29	N. W.
March	32.3	54.5	12.5	42.0	23.	8.	14.7	6.65	N. W.
April	44.0	71.5	24.0	47.5	37.5	9.5	17.5	2.81	N. W. & S.
May	55 8	84.0	35.5	48.5	31.	4.5	16.7	5.65	N. S. & Var.
June	69.2	96.5	50.0	46.5	31.	10.	21.7	1.07	N. W. & Var.
July	69.4	89.5	52.0	37.5	33.	8.	19.2	2.55	N. W. & Var.
August	70.5	92.0	51.0	41.0	25.5	12.	21.	7.84	N. W. & Var.
September	59.8	79 0	34.5	44.5	26.5	5.	15.2	9.19	N. & Var.
October	47.6	65.0	34.0	31.0	22.5	4.5	14.1	5.37	N. W. & S.
November	44.0	67.5	13.5	54 0	24 5	3.5	13.8	9.02	N. & Var.
December	34.8	59.0	8.0	51.0	28.0	3.5	13.5	4.37	N. W. & S. W.
For the year	48.2	....	....	46.5	....	....	....	63.44	

Mean temperature for the year 1888 was 48.2 Fah. Total amount of rain and melted snow, 63.44 inches.

TABLE II.

Compiled from the Summary of Meteorological Observations, at Hope Reservoir and City Hall, for the year 1888.

MONTHS.	BAROMETER. Reduced to Sea Level, and to 32°				THERMOMETERS.				Relative Humidity.	WIND.										WEATHER.						RAIN AND SNOW.	
										Prevailing Direction. No. of days it was.										Atmosphere. No. of days it was.							
	Mean.	Maximum.	Minimum.	Range.	Mean.	Maximum.	Minimum.	Range.	Mean.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Variable.	Mean Velocity.	Clear.	Fair.	Variable.	Rain or Snow.	All Others.	Mean Amount of Cloud.	Amount of Rain or Melted Snow in inches.	Depth of Snow in inches.
January...........	30.08	30.82	29.12	1.70	21.	56 5	-5.	61.5	70	5	1	0	1	2	0	3	13	6	10	10	5	1	15	0	4 4	4.63*	14.00
February...........	30.05	30.44	29.48	.96	29.5	53.5	0.	53 5	72	5	1	1	0	2	0	2	11	7	9	8	9	0	12	0	4.6	4.29*	4.50
March.	29.96	30 57	28.89	1.68	32.3	54 5	12.5	42.	70	5	1	3	0	1	2	3	12	4	12	9	8	0	14	0	4.8	6.65*	8.00
April..............	30.07	30.53	29.43	1.10	44.	71.5	24.	47.5	62	3	1	0	0	6	0	4	11	5	9	5	13	1	11	0	4.9	2.81*	......
May................	30.00	30.30	29.70	.60	55.8	84.	35.5	48.5	76	6	4	1	3	6	1	1	3	6	8	1	10	0	20	0	6.9	5.65	......
June....	29.91	30.24	29.60	.64	69.2	96 5	50.	46.5	68	2	3	0	1	4	4	1	6	9	7	2	15	0	13	0	4.6	1.07	.....
July....	29.98	30.27	29.35	.92	69 4	89.5	52.	37.5	70	4	2	1	0	5	4	2	7	6	7	1	20	0	10	0	5 0	2.55	......
August	29.95	30.29	29.33	.96	70 5	92.	51.	41.	72	0	1	1	0	5	5	4	7	8	7	1	18	0	9	3	4.8	7.84	......
September.....	30 05	30.63	29.22	1.41	59 8	79.	34.5	44.5	82	9	1	0	2	2	3	0	5	8	7	2	6	0	20	2	6.1	9.19	......
October............	29.90	30.48	29.27	1 21	47.6	65.	34.	31.	75	3	1	1	3	4	3	3	11	2	8	4	7	1	19	0	5.9	5.37*	......
November..........	30.08	30.80	29.23	1.57	44.	67.5	13.5	54.	77	8	1	1	0	2	4	5	3	6	9	4	11	0	15	0	5.6	9.02*	4.00
December.........	29.95	30.56	28.75	1.81	34.8	59.	8.	51.	70	4	0	0	1	2	7	6	8	3	9	7	15	0	9	0	4.7	4.37*	1 00
Means for the year.	30.00	......	......	1.21	48.2	.....	......	46.5	72	..	..	..	..	..	..	..	..	..	9	....	....	....	...	....	5 2	....	......
Totals for the year.	......	......	......	......	......	......	.....	......	....	54	17	9	11	41	33	34	97	70	....	54	137	3	167	5	....	63.44	31.50
Extremes....	......	30.82	28.75	2.07	......	96.5	-5.	101.5	....	..	..	..	..	..	..	..	..	..	...	....	....	....	...	....	...	....	......

Yearly Summary for 1887.

Means for the year.	30.01	......	......	1.26	49.4	......	......	47.	73	..	..	..	..	..	..	..	..	..	8	....	....	....	....	....	5.2	....	......
Totals for the year.	......	......	......	......	......	......	......	......	....	63	22	7	14	45	38	26	77	73	....	35	147	14	154	15	....	50 98	54.00
Extremes..........	......	30.97	28.94	2.03	......	94	-1.5	95.5	....	..	..	..	..	..	..	..	..	..	....	....	....	....	....	....	....	....	......

Yearly Summary for 1886.

Means for the year.	30.01	......	......	1.13	48.8	......	......	46.8	74	..	..	..	..	..	..	..	..	..	8	....	....	....	....	....	5.0	....	......
Totals for the year.	......	......	......	......	......	......	......	......	....	51	27	12	7	56	30	39	69	74	....	34	143	18	160	10	...	52.02	54.50
Extremes..........	......	30.80	28 69	2.11	......	95.5	-5.5	101.	....	..	..	..	..	..	..	..	..	..	...	....	....	....	...	....	....	....	......

Yearly Summary for 1885.

Means for the year.	29.98	......	......	1.09	48.7	......	......	46.6	71	..	.	..	..	..	..	..	..	..	9	....	...	....	....	....	4.6	....	......
Totals for the year.	......	......	......	......	......	......	......	......	....	46	21	8	14	56	43	42	74	61	....	45	157	17	142	4	....	39.70	27.25
Extremes..........	......	30 82	28.99	1.83	......	93.5	-1.	94.5	....	..	..	..	..	..	..	..	..	..	....	....	....	....	....	....	....	....	......

Yearly Summary for 1884.

Means for the year.	30.01	......	......	1.05	49.5	......	......	49.2	76	..	..	..	..	..	..	..	..	..	9	...	....	....	....	....	5.3	....	......
Totals for the year.	......	......	......	......	......	......	......	......	....	57	22	8	14	42	60	27	63	73	....	36	127	26	166	11	....	48.76	44.50
Extremes..........	......	30.97	28.93	1.86	......	94.	-10.	104.	....	..	..	..	..	..	..	..	..	..	....	....	....	....	....	....	....	....	......

TABLE II.—CONTINUED. *Summary of Meteorological Observations at Hope Reservoir and City Hall, for the years 1881–1883.*

MONTHS.	BAROMETER. Reduced to Sea Level, and to 32°.				THERMOMETERS.				Relative Humidity.	WIND. Prevailing Direction. No. of Days it was.									WIND.	WEATHER. Atmosphere. No. of Days it was.					WEATHER.	RAIN AND SNOW.	
	Mean.	Maximum.	Minimum.	Range.	Mean.	Maximum.	Minimum.	Range.	Mean.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Variable.	Mean Velocity.	Clear.	Fair.	Variable.	Rain or Snow.	All others.	Mean amount of Cloud.	Amount of Rain or Melted Snow in inches.	Depth of Snow in inches.
Yearly Summary for 1883.																			Mean Force.								
Means for the year..	30.05			1.08	48.2			45.5	72										2.2						5.1		
Totals for the year..										43	31	7	11	44	51	35	70	73		45	136	17	156	11		45.71	73.00
Extremes....		30.77	28.88	1.89		93.	-9.5	102.5																			
Yearly Summary for 1882.																											
Means for the year..	30.03			1.03	49.2			46.	72										2.2						5.3		
Totals for the year..										54	26	2	16	46	39	40	82	60		44	148	31	136	6		51.84	74.00
Extremes....		30.79	29.22	1.57		95.	-11.	106.																			
Yearly Summary for 1881.																											
Means for the year..	30.00			1.08	49.6			44.5	73										2.15						5.1		
Totals for the year..										47	33	12	9	50	47	20	80	67		80	73	54	130	28		52.96	27.50
Extremes..........		30.80	28.97	1.83		96.	-4.	100.																			

The mean velocity and mean force of the wind and amount of cloud are expressed approximately in figures from 0 to 10. Multiplying the mean force by four will give approximately the mean velocity, per hour, in miles.

TABLE III.

Statement showing the air pressure, reduced to sea level, the temperature, precipitation and the prevailing direction of the wind for each month of the year 1888, at Block Island, R. I.

MONTH: 1888.	BLOCK ISLAND, R. I.											
	PRESSURE.			TEMPERATURE.							Precipitation in inches	Prevailing Wind direction.
								Daily Range.				
	Mean.	Highest.	Lowest.	Mean.	Maximum.	Minimum.	Absolute Range.	Mean.	Greatest.	Least.		
January.. ..	30.084	30.80	29.21	24.8	55.0	-3 0	58.0	16.3	32.4	5.5	2 12	N. W.
February. ..	30.037	30.46	29.52	29.7	48.8	0.9	47.9	13 0	34.3	5.0	1.14	N. W.
March......	29.954	30.54	28.89	30.8	51.7	14.6	37.1	11.0	20.9	3.0	2.80	N. W.
April	30.063	30.53	29.50	41.1	60.0	26.9	33.1	12.5	18.0	4.7	1.35	N. W.
May....... .	29.981	30.29	29.68	49.9	71.0	34.9	36.1	10.0	21.1	3.6	3.54	N. E.
June........	29.899	30.23	29.62	62.3	82.6	49.0	33 6	13.4	19.5	6.5	.62	W.
July........	29.971	30.25	29.46	64.2	81.2	53.2	28.0	11.5	19.0	4.7	1.03	S. W. N. W.
August.... ..	29.951	30.26	29.59	66.2	81.0	55.4	25.6	11.3	17.0	4.4	1.32	W.
September. .	30 046	30.60	29.22	60.1	74.7	44.3	30.4	9 7	18.0	4.1	5.49	N. E.
October....	29.918	30.43	29.38	49.7	62.3	34.1	28.2	10.1	17.6	3.5	2.37	N. W.
November...	30.077	30.76	29.21	45.6	64.4	21.0	43.4	10.8	21.8	4.0	4.17	N. E.
December...	29.970	30.58	28.75	36.0	54.3	9.5	44.8	11.1	21.4	4.8	1.23	N. W.
Annual.....	29.996	30.80	28.75	46.7	82.6	-3.0	37.2	11.7	....	...	2.26*	N. W.

*2 feet 26 inches.

Signal Office, War Department, Washington, D. C.

CATTLE COMMISSION.

The year 1888 was not in general unusually eventful in regard to the prevalence of contagious and epidemic diseases among domestic animals. The instances in which the so called "hog cholera," or swine plague, (pneumo-enteritis), occurred, were less in number than the average of previous years, since the establishment of the Board, so far as reports thereof were made to the secretary, or any cognizance thereof was obtained from any reliable source of information. Glanders and farcy in horses and mules existed in larger numbers than usual, especially during the last four months of the year, and the "pink-eye" among horses was somewhat prevalent in several localities during the year. Pneumonia and spinal meningitis were less frequent than during 1887, so far as the secretary had knowledge, personally, or by reports.

PLEURO-PNEUMONIA.

This very violent and highly infectious disease existed early in the summer season in very considerable numbers in localities from whence some of the milch cows, kept for dairy purposes, in Rhode Island, are obtained. Notice was given forbidding the purchase of neat-cattle in, or transportation from, such localities, for sale, use or introduction into Rhode Island.

The authorities of those localities called upon the general government for assistance in suppressing and stamping out the disease under the acts of Congress relating thereto, which assistance was granted, through the Bureau of Animal Industry, and complete eradication was reported as having been accomplished.

Several cases of suspected pleuro-pneumonia were reported during the year, with request for immediate attention, but which, as was to be expected, were found to be only simple pneumonia or other similar and non-contagious disease.

In the West, and especially in Illinois, the efforts to stamp out the disease entirely have been of the most thorough and pains-taking character—neither labor nor expense, within any reasonable limits, seem to have been spared in the accomplishment of the object, which was successfully carried out according to the statements of reliable persons, who have the fullest knowledge thereof.

It does not seem that the disease can get any foothold or acquire any, even moderate prevalence in Rhode Island, under the rules and regulations of the State Board of Health as they now stand, and with such assistance as may be expected from the general government.

GLANDERS AND FARCY.

These different manifestations of one and the same disease, have appeared in larger numbers during 1888, especially during the first two and last three months of the year. This circumstance was also the experience of neighboring States. Extreme climatic changes, frequently and suddenly occurring, have their effects upon the health of horses as well as upon that of human animals, being as they frequently are, subjected to hard usage and unnecessary exposure, many times from ignorance and many times from sheer outrageous malignity. The horse tribe have by far the hardest treatment of any of our useful domestic animals, and as the most dangerous exposures occur as the colder months advance, so certain sicknesses of horses occur at those times, and it is very probable that the virus of chronic glanders existing in a dormant state in the horse, is developed rapidly by the occurrence of common colds and any of the various inflammatory affections, caused by improper usage and exposure.

The occurrence of glanders or number of horses destroyed because of having the disease during 1888, in the different months of the year, was as follows :

January 5, February 7, March 3, April 3, May 3, June 3, July 2, August 2, September 4, October 12, November 9, December 13.

They were found in the towns following with the number in each town as stated :

Providence 29, Pawtucket 11, Lincoln 9, Cranston 6, Johnston 4, East Providence 3, North Providence 2, Narragansett 2.

SWINE-PLAGUE.

The so called hog-cholera or swine-plague, (technically, pneumo-enteritis) has not occurred to any large extent in any locality in the State within the knowledge of the secretary, by official report or otherwise.

Great efforts have been made and are now actively and persistently continued, to ascertain the causes of the disease by pathological and biological investigations and practical experiments in the laboratories and swine houses of the universities and agricultural colleges of several of the western states, where the combined losses, caused by the fell disease, run into millions of dollars annually. From no other disease of domestic animals are such great losses sustained. The definite solution of the great problem of cause and prevention, is an accomplishment most ardently to be desired.

TUBERCULOSIS.

A report upon tuberculosis, in compliance with the request of the General Assembly, by resolution, March 23, 1888, was prepared by the secretary and presented at the January session, 1889. The paper will be found in subsequent pages of this report.

APPENDIX A.

The following circulars, written for the purpose of distribution in localities where the diseases which they respectively represent, have epidemic or large, or even small prevalence, with the design of giving some knowledge of the peculiar characteristics of each of the diseases and the methods that should be taken to prevent a further extension of such prevalence. They have the sanction of the Board and will be distributed gratuitously when called for under the circumstances above mentioned:

From the Office of the State Board of Health, October, 1888.

Circular No. 92.

TYPHOID FEVER AND ITS PREVENTION.

As a cause of death, Typhoid Fever has occupied a prominent place in the mortality records of Rhode Island. According to the returns of deaths, there have been during the last twenty-five years, an annual average of about three and one-third deaths from this fever in every one hundred deaths from all stated causes. Taking Fevers of all kinds, the death average has been about three and two-thirds in every one hundred from all causes. Typhoid Fever ranks at about nine in the numerical order of the most prominent causes of death in Rhode Island. One quarter of the whole number of deaths (and presumably nearly an equal proportion of the sickness) from Typhoid Fever has occurred in the period of life between 20 and 30 years of age, and and one-sixth between 15 and 20 years; periods which give the greatest promise of adding to the public wealth.

It will be seen that whatever practicable methods may be adopted to prevent the occurrence of the disease, will be of great advantage, not only to individuals, but to the communities and State.

All the causes of Typhoid Fever are not definitely known. It *has seemed* in a considerable proportion of cases to have been caused directly in the first place by exposure to poisonous emanations proceeding from, or the use of water contaminated by, the putrefection of animal and vegetable matter, in sink spouts, sink drains, cesspools, privy vaults, or collections of the same material in the closets, cellars and elsewhere in quantity.

In every considerable number of instances, where investigations have been made, the disease had evidently been caused by the water, or milk, or food, used, which had been in each case contaminated by the excretions from the bowels of some person sick with the disease, days or weeks previous. Evidence is ample that there is a poison generated in the intestines of Typhoid Fever patients, which, after expulsion from the body, passes through a change by which it acquires the specific property of causing the disease in other persons whenever it gains introduction into the bodies of such persons. It will be evident, then, that whatever other causes there may be for the production of Typhoid Fever, the proof is quite conclusive that, if the discharges from the bowels of a person affected with the disease are thrown upon the surface of the ground or elsewhere, or if the water used in the washing of the cloths, hands or any article soiled with the same discharges, and some portion of such discharges or such soiled water finds access by the washings of rain, or by percolation into the soil, to collections of water in wells, springs or flowing streams which may be used unboiled for drinking, or for washing milk cans or other culinary articles, or the washing of celery or other vegetables or fruit not cooked before eaten—the specific poison of Typhoid Fever may be carried by the water so contaminated by such discharges, into the bodies of other persons, and produce the disease, even if the amount of water carrying the poison is scarcely appreciable.

The poison is believed by the larger part of the Medical Profession, to be a vital organism, or living germ or microbe so called, capable of rapid multiplication in the intestines and also in and upon putrefying filth ; its characteristic is, that it affects certain small glandular bodies in the intestines, producing congestion, inflammation and ulceration of these glands ; and various nervous or constitutional disturbances and derangements follow. Whether the inflammation of the glands is due in whole or in part to the presence of and contact with the microbes, or whether it is caused by a poisonous product called ptomaine, which results from the reaction of the microbes upon the fluids and tissues of the intestines, is a question still unsolved. It matters little, however, to the methods necessary to be taken for the prevention of the disease.

Typhoid Fever is not contagious in the same sense as measles and whooping cough ; that is, the germs or virus or infectious particles of the disease, do not float in the atmosphere of the sick room, and the disease is not taken by those who minister to the sick, provided they observe the necessary precautions.

But Typhoid Fever is evidently communicable from one person to another by means, as before observed, of the contamination of water by the discharges from the bowels of a person sick with the disease, whether that is the only way in which the disease can originate or not.

Incubation. The period of time which will elapse, after the reception of the Typhoid Fever poison into the system, before the disease will be manifest, varies greatly and is due to individual peculiarities and conditions. It is seldom less than eight or nine days and may be three weeks—usually, however, from eleven to thirteen days.

How to prevent Typhoid Fever. It will be obvious from the remarks previously made, that the most effectual method of preventing the communication of Typhoid Fever from one person to another, or to many others, is the disinfection or entire destruction of the disease germs or infectious poison, **immediately** after its passage from the bowels. This can be done by having on hand the Disinfecting Solution* No. 1, and using as directed. The solution should be kept in another room, and when brought in for use should be carried out as soon as used, so that the odor (which is of no value in the destruction of disease germs) may not disturb the sick. Disinfecting solution No. 2 may be used as directed for the above purpose, if an odorless disinfectant is desired. It is better not to disturb large collections of filth, as in privy vaults, cesspools and elsewhere, by attempting removal during a continuance of the disease, but disinfect such accumulations and also all foul sink drains, thoroughly with disinfecting solution No. 1. Use one gallon of the solution for each gallon of filth, by estimation.

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*Disinfecting Solution No. 1.

Dissolve Chloride of Lime of the best quality in soft water, in the proportion of four ounces to the gallon.

Use one pint of solution for the disinfection of each discharge in Typhoid Fever. Mix well and leave in vessel for at least ten minutes before throwing into privy-vault or water-closet. The same directions apply for the disinfection of vomited matters.

Disinfecting Solution No. 2.

Corrosive Sublimate and Sal Ammonia, of each, four ounces. Dissolve in one gallon of hot water; add a half ounce of laundry bluing to color the solution.

One fluid ounce of this standard solution to the gallon of water will make s suitable solution for the disinfection of clothing. The articles to be disinfected must be thoroughly soaked with the disinfecting solution and left in it for at least two hours, after which they may be wrung out and sent to the wash.

Solution of corrosive sublimate should not be placed in metal receptacles, for the salt is decomposed and the mercury precipitated by contact with copper, lead or tin. They should be kept in glass, earthen or wooden vessels.

Disinfection of Clothing.—Boiling in water for half an hour will destroy the vitality of all known disease germs, and there is no better way of disinfecting clothing or bedding which can be washed than to put it through the ordinary operations of the laundry. No delay should occur, however, between the time of removing soiled clothing from the person or bed of the sick and its immersion in boiling water, or in one of the above solutions ; and no solid article should be permitted to leave the infected room until so treated.

Clothing may also be disinfected by immersion for two hours in a solution made by diluting *Solution No. 1* with nine parts of water—one gallon in ten. This solution is preferable for general use, especially during the prevalence of epidemics, on account of the possibility of accidents from the poisonous nature of *Solution No. 2.* When diluted as directed, this solution may, however, be used without danger from poisoning through the medium of clothing immersed in it, or by absorption through the hands in washing.

Small pieces of cloth and paper which have been soiled by the excretions should be burned immediately.

Soiled hands may be washed in *Solution No. 1*, diluted one-half.

As an additional precaution, the milk and water used, especially during an epidemic of Typhoid Fever, should be boiled an half hour before using.

There are several, more or less efficient disinfecting agents, used singly or in combination, but the above are the most reliable of all, and by naming them only—including heat at a high temperature—all confusion or indecision, as to selection, may be avoided.

If the Typhoid Fever poison can be spontaneously generated in putrefying filth, which may be possible, it is quite clear that such filth should all the more be prevented from accumulating and reaching putrefective decomposition. Such filth affords a natural breeding soil for the germs of many infectious diseases, and in the absence of such germs gives off gaseous emanations that slowly but surely deteriorate the general health. Keep all such polluting material far away.

The waste pipes of sinks and laundry tubs and slop-hoppers, if connected with the drain-pipe, sewer or cesspool, should be well trapped ; or if connected by water-tight pipe, with long drains to open surface distribution, as can be practiced on elevated locations in the country.

The water of wells is many times the source of ill health and not unfrequently of serious obscure diseases, because of the proximity of such wells to the sink drains, privy vaults, cesspools and other accumulations of filth, the fluid contents of which are constantly leeching into the soil and some portion of which finds access to the well. Wells should be at least a greater distance from the privy and cesspool than the depth of the well, if in gravelly, porous soil, where the percolation is more directly downward, but in clayey or compact earthy strata no rule can be given except to get such conveniences as far from the well as circumstances will permit. When the water of wells gets low, the noxious element is more concentrated and the danger from use increased.

POINTS AND PROPOSITIONS THAT SHOULD NOT BE FORGOTTEN.

1. **That cases of Typhoid Fever, apparently mild,** as well as the severer cases, may furnish the virus sufficiently virulent for the infection of a large number of persons with the severest forms of the disease.

2. **That the virus in the discharges** from the bowels of persons sick with Typhoid Fever, if not destroyed at the moment of passage, is very liable to find access to water somewhere in some way.

3. **That the virus seems to meet with the proper transformation or change** for the acquirement of its most virulent properties, or for retaining such virulent properties when acquired, in water, as well as in putrefying organic matter.

4. **That if the virus gets into water,** and that water is used without boiling a half hour or so, the person using the water by drinking or receiving it into the stomach in any way, even in minute quantity, will be liable to an attack of the disease.

5. **That the virus is not destroyed by a low temperature**—even surviving enclosure in ice for months—and may remain dormant, when moisture and warmth and other conditions are not present, until circumstances favor its further development in or upon putrescent material or its natural action upon certain living tissues.

6. **That complete destruction of the virus immediately after it has been discharged from the bowels,** is the only absolutely efficient method of preventing the possibility of the disease being communicated to some other person.

7. That the use of the disinfecting solutions, above named, or by subjection to high degrees of heat, if used as directed in the marginal notes, will effect such complete destruction.

8. That small accumulations of decomposing material in living rooms or cellars, or in larger amount in the near vicinity of dwellings, may foster, if not produce, the specific agent, by whatever name called, that causes the disease.

9. That it is not alone the premises upon which a case of Typhoid Fever exists which should have sanitary attention, but in cities and villages, the adjoining premises also should have the disinfection of all putrescible matter in quantities, and the well water, if where the possible percolation of the drainage of privies or cesspools or other accumulations of filth can reach it, should be boiled as a reasonable precaution.

10. That in the care of the sick, as a means of promoting recovery, the strictest attention should be given to the directions of the physician in regard to ventilation, temperature of the apartment, intrusion of visitors, unnecessary attendants, freedom from annoying sights and sounds, sufficiency of drink, washing or bathing, etc., etc.

SPECIAL NOTICE.

The above circular is mainly designed for distribution generally in localities where Typhoid Fever is a regular visitor in larger or smaller numbers, and particularly in any locality upon the occurrence of two, three or more cases at nearly the same time, as a means of preventing the spread of the disease, and especially of an epidemic prevalence.

Health Officers should have copies on hand and be alert in their distribution when signs of danger appear.

Copies may be had by application to the Secretary of State Board of Health, Providence.

Parties having copies of the above, should after present use, file them away where they may be conveniently found when needed at any future time.

[The suggestions in the circular in regard to the materials and methods proposed for disinfection are in accordance with the results of a series of scientific investigations, extending through several years and covering many hundreds of experimental tests, made by a committee of the American Public Health Association, which was composed of eminent scientists in the line of biological research.]

APPENDIX B.

From the Office of the State Board of Health, November, 1888.

CIRCULAR No. 93.

SCARLET FEVER AND ITS PREVENTION.

Scarlet Fever is an infectious and contagious disease. The innumerable instances in which an attack of one or more persons is known to occur from, or can be traced to, exposure to a previous case of the disease, as against the exceedingly few in proportion, whether in compact communities or in isolated localities, who are attacked and no exposure known, are overwhelming proofs of the communicability of the disease. Even admitting that it *may* occur *spontaneously* (which is extremely doubtful), it does not disprove its communicability when once started.

The *spontaneous* production of rabic poison in the saliva of a mad dog, does not disprove the fact that the poison is infective when communicated to other animals, including mankind, although not all animals or persons bitten have hydrophobia.

All persons are not alike in their susceptibility to all diseases, nor to any one disease ; and all children are not equally alike susceptible to the poison of scarlet fever, measles, diphtheria or other contagious or infectious diseases. Neither do children or adults have the same susceptibility or insusceptibility *at all times* to the attacks of the same disease, the resisting vital forces successfully opposing the invasion or progress of the disease at one time and yielding to the same disease at another.

The vital resistance to the inception or advancement of scarlet fever, diphtheria and measles, increases from childhood, through youth to adult age, almost wholly in the cases of scarlet fever and diphtheria, and to some extent in the case of measles, so that, if children are kept from having these diseases up to ten or twelve years of age, the chances of escaping them entirely are greatly increased.

The following extract from the Annual Report of the Registrar General of England, for 1886, will be pertinent on this point. The conclusions arrived at are the result of a close study of the returns for a period of twenty-seven years, during which the number of deaths from scarlet fever amounted to nearly five hundred thousand, the sex, the age-period, etc., given in the returns, as in the

Rhode Island returns, and the records of 17,795 cases of the disease admitted during twelve years, 1874–1885, into different hospitals in London :

1. "The mortality from this disease is at its maximum in the third year of life, and after this diminishes with age, at first slowly, afterwards rapidly.

2. This diminution is due to three contributory causes ; (*a*) the increased proportion in the population at each successive age period of persons protected by a previous attack ; (*b*) the diminution of liability to infection in successive age periods of those who are as yet unprotected ; (*c*) the diminishing risk in successive age-periods of an attack, should it occur, proving fatal.

3. The liability of the unprotected to infection is small in the first year of life, increases to a maximum in the fifth year, or soon after, and then becomes rapidly smaller and smaller with advance of years.

4. The chance that an attack will terminate fatally, is highest in infancy, and diminishes rapidly with years to the end of the twenty-fifth year, after which an attack is again somewhat more dangerous.

5. The female sex throughout life, the first year probably excepted, is more liable to Scarlet Fever than is the male sex.

6. But the attacks in males, though fewer, are more likely to terminate fatally.

Now it is sometimes said that the separation from its family of a child who is attacked by Scarlet Fever is scarcely worth the trouble and expense it involves, seeing that the rest of the children, though they may escape on that special occasion, are almost certain to contract this very common disease at some future time, and may therefore as well, if not preferably, have it at once The results, however, to which our statistical inquiry has led us, are completely subversive of such a position. They show independently of the plain fact that a very large proportion of persons go through life without contracting the disease, that the longer an attack is deferred, the less likely is it to occur at all ; and not only so, but that even supposing it to occur eventually, the less likely is it to end fatally."

Based on so large a number of observed facts, what more forcible presentation could be made of the necessity of the separation of the sick with scarlet fever, from those liable to contract the disease, as a means of restricting the disease to the smallest numbers, and in that way carrying the largest possible number of children beyond the age of probable liability to an attack.

Parents, school officers, teachers and all persons having the charge of children, can accomplish large results in the saving of the lives of those in their care, by giving attention to the means available for the prevention of sickness, and especially of such diseases as scarlet fever, diphtheria, measles and whooping cough.

The large proportional mortality from scarlet fever, the frequent disablements that follow recovery, as in diseases of the ear, causing deafness, and of the eye, causing impairment of sight, of the air passages and lungs, and of the heart and kidneys, make it one of the most formidable of the prominent acute diseases.

During the year 1887 there were 266 deaths from scarlet fever in Rhode Island; in 1880 there were 468 ; in 1879 there were 311 ; in 1874 there were 462, or about one-ninth of all the deaths in the State during that year were from scarlet fever.

During the last fifteen years there have been 2,500 deaths from that disease in the State. reckoning seven recoveries to every death, there have been 20,000 cases of sickness from scarlet fever in Rhode Island during that time.

Will it be said that the disease is of but little consequence and scarcely needs attention?

It is proposed herewith to present some suggestions in the way of measures to be taken for preventing as far as possible the spread of Scarlet Fever, whenever the first cases of that disease occur in any community.

The following propositions, designed to aid in such purpose, are substantially the same as were published by the Rhode Island State Board of Health in 1878, and which were at that time unfavorably commented upon by some parties as needless and mischievous, and likely to occasion alarm not warranted by a disease so simple in its character and requiring so little attention.

It is with satisfaction that it can now be stated that there is probably not a city of any importance in the United States, or in other enlightened countries, which has not in force, by municipal ordinance or by the health authorities, rules and regulations in relation to scarlet fever, substantially the same as those which were then and are herewith presented.

The directions given will have particular reference to Scarlet Fever. This disease is also popularly known under the different other names, of Canker Rash, Scarlet Rash, Putrid Sore Throat, Scarlatina, etc., all and singular of which are produced by one and the same poison, and are capable of reproducing the same, and consequently thereby infecting other persons with the same disease.

Scarlet Fever is caused by the introduction within the body through the medium of the air passages, alimentary canal or the skin, of certain specific poisonous particles of matter or organic germs. These poisonous particles or germs seem to be eliminated largely, if not entirely, from mucuous linings of the alimentary canal and other passages of the body and from the skin, during the sickness from that disease.

The excretions or waste material from the bowels, kidneys, skin, mouth and nostrils, contain and carry out of, and away from the body, these particles or germs of the disease, which are exceedingly minute in size, and may, after becoming entirely dry, be caught up and float in the air, or be carried on other floating matter, for indefinite periods of time, and for long distances in atmospheric currents, without having their poisonous qualities or vitality destroyed.

It is for this reason that every precaution possible should be taken to destroy these infective germs, or the poison of the virulent particles of matter as soon as possible after their separation from the body.

When, therefore, it is ascertained that a member of the family is affected with the disease, let the following directions be observed and carried out, as far as circumstances will permit, under the supervision, and modification, when needed, of the physician in attendance.

A close observance of them will be attended with considerable labor and inconvenience, but it must not be forgotten that no person has a right to injure his own family, his neighbor, or his fellow man anywhere, by willful or indolent neglect of known duties in the way of restriction of dangerous diseases.

DIRECTIONS.

1. **Entire separation of the sick, as far as possible, from all other persons,** except such as are absolutely required for attendance and nursing. Nothing can compensate for this precaution for the restriction of the disease and the welfare of the patient.

2. **The patient will do the best in a dry, well ventilated and properly prepared apartment.** An upper room is dryer and safer, as well as more airy than one near the ground. The temperature should be kept between 68° and 72° F., as nearly as possible during the stage of high fever, and at from 74° to 76° when sitting up or during convalescence.

3. **To prevent all possibility of harboring the infective virus,** all furniture not really needed, all ornaments, pictures, books and maps, all valuable carpets, drapery or other cloth material that might be damaged by fumigation or disinfection, and all furniture upholstered with cloth, should be entirely removed. Pieces of carpet and old rugs may be used to cover the naked floor and disposed of by burning after convalescence, or disinfected by fumigation or heat. Fresh air should have access to the room, special care being taken to protect the patient from currents or drafts, or sudden introduction of large volumes of air of lower temperature than that of the room.

4. **The bed provided should be as elastic and cool as can be furnished.** Soft feather beds, or any into which the body of the patient sinks, are entirely inadmissible. Rubber sheeting, properly applied, is a very effectual protection of the under bedding.

5. **Attention to cleanliness and disinfection is indispensable.** The body and bed linen, and all larger clothes, should be frequently changed, and immediately on removal immersed in vessels containing a disinfecting solution,* which should be kept near the room for the purpose of retaining soiled clothes until opportunity occurs for thoroughly boiling for at least one half hour.

Heat above the boiling point, whether by boiling or baking, is a powerful disinfectant, and effectually destructive of infective germs. The clothing of nurses should also be disinfected before coming in contact with persons liable to infection, and the above precautions should be continued until the period of peeling or scaling of crumbled scarf skin has ceased. **These fine branny or mealy scales are especially dangerous as carriers of the contagium of Scarlet Fever.**

In order to prevent the drying and flying off of the fine branny scales that form on the skin and peel off or separate from it, and the drying of the infective matter or germs which they carry, and which by becoming entirely dry, break into invisible particles, sufficiently light in weight to be carried hither and thither in atmospheric currents, it is an excellent practice to rub thinly upon the skin some glycerine, vaseline, or other unctuous substance, which will entangle and hold the scarfy and scaly material until it is washed and wiped off, and then the washings, undergarments and cloths used, should be disinfected by boiling water or solution No. 1. Daily washings and anointing of the whole skin would be of great practical advantage.

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* See Page 125.

Cotton clothing is much better than woolen for use in the sick room, being less likely to entangle and hold the scales or germs of contagion, and also more easily disinfected.

6. All the larger discharges from the mouth by vomiting, etc., and all the stools and passages of water, should fall into vessels containing at least a pint of disinfecting solution.* Keep out of streams of water and away from the vicinity of wells. If water closets or privies must be used, let them be frequently and thoroughly disinfected.

Good napkins and handkerchiefs should not be used for the smaller discharges from the mouth and nose, but instead small pieces of old cotton cloths, which may be burned immediately after use.

7. After the complete termination of the disease, the floor, walls, windows and ceiling of the room should be thoroughly disinfected by washing or by fumigation. Whatever is of small value had better be burned. The rooms may be washed thoroughly in every part with the following solution : Chloride of Lime, half a pound ; crude Carbolic Acid, one ounce ; hot water, two gallons. When practicable, the walls and ceilings should be lime washed or kalsomined.

To fumigate a room with sulphurous acid gas, the contents must be so arranged that the fumes may come in contact, as far as possible, with the entire surfaces of all articles to be disinfected, as well as sides of the apartment.

Across a tub partly filled with water place a pair of tongs or other support for an iron basin or skillet, or thick earthern pan. Put in the basin or pan a layer of ashes one inch thick, then a layer of bright live coals, upon which scatter at least two pounds of powdered or crushed sulphur for every 1200 cubic feet of air space in the room to be fumigated. Close the apartment tight, and leave for twenty-four hours. Then ventilate freely.

To disinfect with dry heat alone, large ovens must be used, and the temperature carried up to degree at which bread would be rapidly baked, and continued for one hour.

8. In case of death, the body should be wrapped in large cloths, thoroughly saturated with a strong solution of chloride of lime or soda, and placed in a coffin as soon as possible.

Public funerals of persons dying of contagious disease should never be held.

9. Whenever a virulent contagious disease occurs in any community, it is the duty of all citizens to coöperate with the afflicted family in repelling the attack of the invader, and confining the disease to the first cases.

Breathing air containing sewer gas, or any gases of decay, or exhalations from any form of filth, in cesspools, water closets, sinks, foul cellars, or uncleansed animal bodies, or repeatedly rebreathing one's own breath, or the breath of others in closed rooms, especially in closed bed-rooms through the night, are unfailing sources of deterioration of general health, and whatever impairs general health lessens the natural vigor of the individual, lessens the power of resisting the attacks of any disease, and especially predisposes to attacks of infectious maladies, like Scarlet Fever and Diphtheria, and also greatly increases the liability of death.

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*See Page 125.

While the above suggestions have particular reference to Scarlet Fever, many of them will apply equally well to other forms of contagious diseases. Small Pox and Diphtheria preëminently require the same management.

Paragraphs numbered one, two and three are applicable to nearly all forms of dangerous maladies, while the first section of paragraph six has especial applicability to Typhoid Fever, and nearly all will apply equally well to Diphtheria.

Doubtless some will question the necessity of such sweeping precautions, (and in many cases they cannot be carried out) but it may be suggested that to the neglect of such precautions may be due in a great measure the continued existence of infectious diseases, whether in isolated or in epidemic visitations, and if infectious diseases are ever to be stamped out of existence, it can be accomplished only by such vigorous measures as will affect the destruction of the disease-producing germs in their infancy.

Health officers should be appointed in every town to act in cases of emergency.

Let this be preserved for future reference in case af need.

Disinfecting Solution No. 1.

Dissolve Chloride of Lime of the best quality in soft water, in the proportion of four ounces to the gallon.

Use one pint of this solution for the disinfection of each discharge in Scarlet Fever. Mix well and leave in vessel for at least ten minutes before throwing into privy-vault or water-closet. The same directions apply for the disinfection of vomited matters.

Disinfecting Solution No. 2.

Corrosive Sublimate and Sal Ammonia, of each, four ounces. Dissolve in one gallon of hot water; add a half ounce of laundry blueing to color the solution.

One fluid ounce of this standard solution to the gallon of water will make s suitable solution for the disinfection of clothing. The articles to be disinfected must be thoroughly soaked with the disinfecting solution and left in it for at least two hours, after which they may be wrung out and sent to the wash.

Solution of corrosive sublimate should not be placed in metal receptacles, for the salt is decomposed and the mercury precipitated by contact with copper, lead or tin. They should be kept in glass, earthen or wooden vessels.

Disinfection of Clothing.—Boiling in water for half an hour will destroy the vitality of all known disease germs, and there is no better way of disinfecting clothing or bedding which can be washed than to put it through the ordinary operations of the laundry. No delay should occur, however, between the time of removing soiled clothing from the person or bed of the sick and its immersion in boiling water, or in one of the above solutions ; and no article should be permitted to leave the infected room until so treated.

APPENDIX C.

TUBERCULOSIS:

A REPORT

UPON ITS NATURE, CAUSES, PROPAGATION,
AND TREATMENT,

AND

ITS PREVALENCE AMONG THE NEAT CATTLE

OF

RHODE ISLAND.

PREPARED,

IN COMPLIANCE WITH A RESOLUTION OF THE GENERAL ASSEMBLY, BY

CHARLES H. FISHER, M.D.,

COMMISSIONER OF PUBLIC HEALTH; SECRETARY OF THE STATE BOARD OF HEALTH;
STATE REGISTRAR OF VITAL STATISTICS.

PROVIDENCE:
E. L. FREEMAN & SON, PRINTERS TO THE STATE.
1889.

State of Rhode Island and Providence Plantations.

OFFICE OF THE STATE BOARD OF HEALTH,
PROVIDENCE, February 28, 1889.

To the Honorable the General Assembly:

A resolution was passed by the Honorable Senate and House of Representatives, June 17th, 1887, and continued by re-passage, March 23d, 1888, to the following effect:

> "*Resolved,* That the State Board of Health be and they are hereby requested to investigate the subject of tuberculosis among the neat cattle of the State, to ascertain the nature, symptoms and modes of propagation; and by visitation of herds, and otherwise, to learn the extent to which the disease is now prevalent in the State, and, as far as may be, the means of restriction and prevention, and report upon the same at the January session of the General Assembly; and the sum of five hundred dollars, or so much thereof as may be needed, is hereby appropriated for the expenses of such investigation."

In compliance with said resolution, the State Board of Health, after full consideration at stated meetings, voted to refer the whole matter to the Secretary of the Board, including methods of investigation and preparation of a report.

The duties imposed by the investigation and report were assumed by the Secretary with no little reluctance and misgiving, owing to the very limited time which could be possibly given to the work and the desire to accomplish the task with satisfactory success.

In order to ascertain the characteristics of the disease by personal observation, veterinarians and cattle owners in all parts of the State were requested by the Secretary to give information of the known or suspected presence of cases, the most obvious symptoms of which were given or set forth to cattle-owners by circulars, posters and personal correspondence.

In order also to ascertain the prevalence of the disease in Rhode Island, a circular was sent to all the butchers in the State stating the appearances of the internal organs of animals having tuberculosis, and asking replies to questions given as to the proportion of animals slaughtered by them and showing such appearances. A summary of the replies will be found in the report.

It also seemed necessary, in connection with the investigation, to extend inquiries beyond the boundaries of the State in relation to its prevalence elsewhere, and especially into those sections of the country from whence our supplies of milch cows, are most largely derived. A synopsis of the result of such outside correspondence will also be found in the report.

It should be stated that it has been in no measure the intention of the Secretary to present in the following report anything approaching an elaborate treatise on the subject of tuberculosis as pertaining to domestic animals.

The design has been by preference to present a *summary* of such facts in relation to the nature, causes, mode of propagation and other characteristics of the disease, as modern investigation and research have seemed to conclusively determine, and also such opinions upon less essential matters as have been and are at the present time held by eminent veterinarians in Europe and America.

The use of technical and other terms, unfamiliar to the general reader, has been avoided as far as possible; and of such words and terms as are not in general use, and the use of which could not well be avoided in the descriptions and statements given, a glossary of explanations will be found appended to the report.

It is hoped that the subject, as herewith presented, will be found sufficiently comprehensive in statement, and sufficiently intelligible in description, to enable all persons interested in the health of mankind as affected by tuberculosis in bovine animals, as well as by the pecuniary interests involved in the ownership of cattle, to understand the dangers to which both interests are exposed, and be thereby induced to make such endeavors as may seem suitable to prevent the occurrence, to restrict the spread, and to stamp out, as far as possible, the existence of the destructive disease.

In the preparation of the paper, use has been made of the works of a number of veterinary authors of eminence, American and European; and while the descriptions of the cases observed by them, and the methods of investigation, pathological and biological, which were pursued, have been omitted, the results have been closely studied, the most prominent and useful facts noted,—and from which, with some personal observation and experience, there have been derived a considerable number of quite definite conclusions, which will be presented in the pages of the report.

Respectfully submitted.

CHARLES H. FISHER,
Sec. State Board of Health.

TUBERCULOSIS.

DERIVATION OF NAME.

Tuberculosis has been known under other and various names from a very early period. Its name was derived sometimes from the appearance of certain symptoms and conditions in the course of the disease, and sometimes from the organs affected. Among the first we may place *consumption*, *pining*, and *wasting*. It has also been and is now frequently called *Tabes mesenterica* ("consumption of the bowels") when the mesenteric glands are affected; *scrofula* when the joints and glandular system become the seat of the disease; *Phthisis pulmonalis*, or pulmonary consumption, when the lungs are involved.

As applied to animals, the term *Tuberculosis* is now in general use, as it covers all the various symptoms and lesions. It takes its name from certain small bodies now called tubercles, which are always present in the organ or organs affected. These tuberculous formations were formerly, and to some extent at present, called nodules, knobs, nodes, cheese-knots, etc.

HISTORY.

Tuberculosis in domestic animals, as well as in the human race, has been known under various names, as previously observed, from a very early period, though we find the whole subject, as related to animals, in a state of obscurity up to 1848. For nearly thirty years longer, little was done towards obtaining a better understanding of this disease. In 1875, Koch, a German investigator, revolutionized the whole study, both in man and the lower animals. From this time forward the nature of many discoveries have been made in relation to this fell malady. Besides, it was not until about the middle of the present century that veterinary medicine began to be taken from the hands of the domestic, self-constituted veterinary surgeon, whose sole knowledge and experience of diseases among animals were obtained in the stable and barn-yard—a sort of adjunct, usually, to his ordinary occupation.

With the diffusion of knowledge, the constantly increasing importance of the animal industries, and the great destruction by disease of our food-producing animals, especially cattle, millions of dollars worth of which annually die of tuberculosis alone—veterinary medicine and surgery received greater attention, and its advances showed a corresponding improvement in the health and treatment of all domestic animals.

NATURE AND CHARACTERISTICS.

Tuberculosis is a disease largely found in horned cattle. It has also been observed, though rarely, in sheep, swine and rabbits, and, still more rarely, in the horse. It is an affection principally, if not exclusively, confined to domesticated or confined animals. It is among them that its ravages have been as great as in the human race. It might be called a disease which attends civilization. Twenty-nine per cent. of adult male cattle slaughtered in New York city are tuberculous, and from 20 to 50 per cent. of the herds supplying that city with milk ; while in some country districts of New York State the percentage is 30.

PREDISPOSING CAUSES.

Domestication is one of the prime causes of tuberculosis. "The stabled cow, the penned sheep, the tame rabbit, the monkey, the caged lion or tiger, or tamed elephant, are almost invariably cut off by tuberculous affections—no doubt due to deficient ventilation and abeyance of normal exercise of the pulmonary functions."* The pet canary bird may be added to this list. The wild oxen of Hungary are exempt from the disease.

As in man, close confinement in ill-ventilated dwellings, with unsanitary surroundings, and inhalation of vitiated air, all favor the disease. In short, many years ago, Baudelocque established the close connection between the inhalation of impure air and phthisis. This fact becomes the more apparent when we find that tuberculosis is less common among cattle allowed to roam the fields than among stabled cows in cities. Confinement plays an important *rôle* in the production of this disease. Add to this, damp, cold, dark, filthy and unsanitary buildings, where the cellars of the stables are made the receptacles of all kinds of impurities, and we find the proper breeding-places of the affection.

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* Sitken's Practice of Med., vol. ii., pp. 258, foll.

Improper, indigestible or too stimulating and irritating food—defective as well in quantity as quality—over-crowding, over-driving, over-working, or extreme fatigue of any kind, irritation and long and excessive lactation, in the case of the cow, predispose to the affection,—the last of which is, in the cow, one of the most fertile causes.

Want of exercise is another fruitful predisposing cause of the affection, as may be seen in the greater exemption of country-bred cows as compared with the stabled cows of cities. "Cattle kept solely for dairy purposes," says Fleming, "and particularly in large towns, suffer by far the most severely from this affection. Constantly confined in stables which are not always well ventilated and clean, deprived of exercise, drained of milk in large quantities, and fed on the kind of aliment which most favors the increase of that fluid—though it may not enhance its quality—it cannot be wondered that the nutritive functions of the cattle so treated must suffer to a serious extent. Indeed, it is a matter of daily observation that the cows which are abundant milkers are most liable to this disease." *

Climate. The disease, again, seems to be excited by continued herding and feeding in damp, cold pastures. Climate is an influential factor. The affection is almost unknown in northern and Arctic climates—as, for example, in Iceland, Norway, Lapland, etc.—(*Lydtin.*) It is, however, very common in the temperate zones and the tropics. The small numbers, however, of cattle in the extreme north may in part explain its absence there; but it has extended to the Hebrides, Australia, and to our northwestern States and Territories. The malady attacks cattle introduced from a warm or mild climate into a country where the atmosphere is cold—and, especially, if it be both damp and cold. This fact was observed long ago in France. Animals reared in mountainous districts are liable to tuberculous disease when removed to low-lying and damp plains.

Age has some influence in predisposing to the disease. Young animals are particularly susceptible, but cows above five years are much more largely affected.

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* Vet. San. Sci. and Police, vol. ii., p. 370.

Sex apparently favors the tendency to tuberculosis. Thus it is in this State almost exclusively confined to cows, and chiefly to milch cows. But it must be taken into account that the cattle of the male species comprise but a very small proportion of the whole number.

Temperament is among the predisposing causes. Cattle which are long-limbed, with narrow chests, of a nervous or lymphatic temperament, with a large excess of loose connective tissue, which is a great prerequisite to fattening, and animals of great lymphatic development are peculiarly predisposed to tuberculosis. Our "best breeds of meat-producing animals are more often affected with tuberculosis, while the disease is less prevalent among unimproved races." Animals of the better kind more easily produce tuberculous offspring.

Close interbreeding is another frequently predisposing cause. Charles Davaine clearly and indubitably demonstrated the dangers of breeding in-and-in, not only to our domestic animals, but to man. Such interbreeding renders the offspring of the animals a more easy prey to consumption than when the parents have no relationship. This fact is patent to all veterinarians and agriculturists; and in-and-in breeding stand chief among the experiments to be avoided. And this is chiefly apparent in the breeding of tuberculous animals. But close breeding of unimproved stock comes under this head also. "Their residence in a hot, forcing atmosphere, and their preservation for breeding purposes even when manifestly healthy, nor the free open-air life and the prompt disposal of unthrifty beasts among the less valuable breeds," must not be ignored.—(*Law.*)

Heredity. Hereditary influence is another important factor in the causation of this disease. We have already referred to the disastrous effects of the close interbreeding of infected animals. Lydtin, a German observer, who has written most exhaustively upon this subject, has established the fact, beyond question, of its heredity, the same as in the case of man. A very large number of cases are on record, given by the most eminent veterinarians of Germany and other countries, of the finding of tuberculous growths in the lungs and other organs and tissues of calves during fœtal life, and in calves of four days old and upward, all of which were the progeny of tuberculous cows, as ascertained at the same time or subsequently.

Of the two parents, the dam in the larger proportion of congenital tuberculosis, affects the young. Thus Göring, an authority, states that, out of 166 cases of bovine tuberculosis, 123 were traced to the dam. Hereditary cases constitute 12 per cent. of all cases of the disease.

Gerlach thought that "heredity had so much influence in this propagation of tuberculosis that it was sufficient to have a few tuberculous bulls in a herd to infect the whole, if in-and-in breeding was the rule." Johne is entirely in accord with Gerlach, and the numerous observations given by him prove that there can be no doubt as to the fact.

The fact that tuberculosis has not been generally observed in animals descended from tuberculous parents, except at an advanced age, and after they themselves have brought forth young, has given rise to two different opinions. According to the first of these — already alluded to — there are found among the animals already infected before birth a certain number in which the primary focus of infection remains localized, or at any rate momentarily arrested in its development, at the same time that the morbid process is confined to organs the least important to the maintenance of life. In such cases it often happens that cattle are killed because of some quite different disease from pulmonary phthisis, or that they die from the latter malady at a later period ; and it is only at the autopsy that the lesions of tuberculosis are discovered. If death has been due to this disease, it is because it has gradually invaded one or more important organs, or had suddenly disturbed or altogether suspended the function of one or several of those organs.

The second opinion, which is older and more universal than the other, is to the effect that animals descended from tuberculous parents inherit a special predisposition to the disease. In human medicine an analogous, if not identical, opinion has been entertained from the earliest times up to the present day.

Pure stock breeding. Fleming and Lydtin agree that — "It cannot be denied that the number of victims to tuberculosis increases with the improvement in, or specialization of, the breeds of the domesticated animals. The complaints so often heard among the breeders of pure stock, because of the considerable losses scrofula and tuberculosis occasion among these animals, support the opinion which attributes to hereditary transmission a notable *rôle* in the production of these maladies.

"The great receptivity for morbigenous agents which is observed so frequently in high-bred animals, and which might be almost considered as one of their typical characteristics, is noted not only in the bovine and porcine species, but also in sheep and horses, as well as nearly always and everywhere among cultivated plants. This strong tendency among high-bred animals to contract disease will ultimately fix a limit to those special varieties produced by in-and-in breeding.

"With regard to tuberculosis, we may specially consider, as causes inherent to the development of the predisposition, the over-increasing mass of connective tissue in these improved and improving breeds of cattle and pigs, more and more specialized for the production of milk and fat. That extreme specialization, that exaggerated activity of the vegetative life in the absence of proportionate muscular exertion —that fatty and gelatinoid degeneration which is met with in most of the tissues of these animals—does it not remind one of hot-house plants? This specialization—this kind of hyperculture—once acquired is, like every other character, susceptible of being transmitted by way of heredity."

Lydtin sums up his views on this subject as follows:

1. "That heredity is not without influence upon the propagation of tuberculosis.
2. That this malady is transmissible by the male as well as the female.
3. That the transmission of the morbific principle to the ovum or fœtus, in course of development, is a cause of sterility in the parents, and frequently occasions abortions and premature births.
4. That a fœtus affected with tuberculosis rarely attains complete maturity or comes into the world in conditions of normal viability.
5. . . . We cannot deny the possible birth (perhaps in great numbers) of tuberculous descendants which can develop and multiply equal to animals, in perfect health and without any predisposition."

From this it follows that, although many exceptions occur, yet we always expect a diseased progeny if one or both parents, particularly the dam, be tuberculous.

DIRECT CAUSES.

Communicability. The generally received opinion relative to the transmission of the disease, is that it is also capable of being communicated in various ways. Lydtin, whom we have quoted above, considers that tuberculosis may be transmitted "through the ovum, sperm, uterine secretions, etc." He gives a large number of authorities to corroborate these views. He says: "The morbific principle can enter the system either by the respiratory or digestive apparatus. The inspired air, food and drinks can act as vehicles; it may possibly be transplanted by way of the generative organs (coitus) or by wounds, accidental or experimental."

Among this class of causes is cohabitation. Stahl, Reuner, Fischer, Ross, and nearly a dozen other investigators, give cases of the infection of healthy animals by new importations of diseased cattle into the herd. This has been claimed in regard to this method of inoculation of the disease in man; but in both instances more proof is needed to make it satisfactory.

To air expired by tuberculous cows has been attributed the production of the disease, as is indicated in the case of rabbits which were forced to breathe such air, and afterwards found to have become tuberculous. The sputa of man afflicted with the disease has been conveyed to dogs by Tappeiner, by means of spray diffused through the air, with like results.

Another channel of infection is through the food. Jessen mentions calves dying from tuberculosis from sucking cows afflicted with this disease; other authorities give examples of many pigs and calves infected through the milk of such cows.

Johne, who made many experiments relative to the causation of tuberculosis in animals, by the ingestion of tuberculous food, gives the following as the results of his investigations:

1. That tuberculosis can be transmitted from animal to animal and from man to animal by feeding on tuberculous substances. . .
2. The materials which most certainly transmit tuberculosis by gastro-intestinal ingestion are tuberculous matter taken from the lungs, pleuræ, and lymphatic glands. (Milk comes next.)
3. Infection is less certain from the ingestion of muscle. . . .
4. Calves, sheep, goats and swine present the greatest susceptibility to tubercular contagion. (Carnivora are not exempt.)

But the chief cause of tuberculosis, whether observed in the lower animals or in man, is in infection, whether indirectly by the ways already mentioned, or by direct inoculation with the disease—its communicability, or contagiousness according to some writers.

In the field of the experimental transmission of tubercle, the work has now been extensive and the results most convincing. Villemin, Gerlach, Chauveau, Colin, Soujon and Count Paul, Günther and Harms, Rivolta and Peroncito, Bagge, Bollinger, Kohne, Semmer, Biffi and Verga, Bouley, Peuch, Aufricht, Toussaint, and other eminent scientists, have contributed in varying degrees to the solution of the question, and the grand result attests indubitably the communicability of the disease.

The early history, then, of tuberculosis among our domestic animals is but brief and unsatisfactory. The great attention which the disease of late has received is owing to the investigations of the tubercular germ (the bacillus tuberculosis) by various experimenters—its culture, its inoculability, its virulent character—all originally carried on in the interests of humanity alone. But this study was naturally reflected upon the very animals upon which the experiments were performed, and the result proved that tuberculosis in the lower animals was identical with the disease in man. This comparative study of the malady gave rise to a new form of treatment, chiefly preventive or hygienic; in short, the treatment was entirely revolutionized and viewed from a very different stand-point.

It is for this reason that tuberculosis among cattle seems, to most persons, a new disease, especially to those who have not kept pace with modern investigations of disease in accordance with the new doctrine known as the germ theory, or rather the theory of pathogenic (disease-causing) germs. It is the application of this to similar morbid phenomena in the lower animals to which is due, in a large degree, the marked progress in veterinary medicine.

SPECIFIC CAUSE.

Inasmuch as this report is designed for popular reading, and will be brought to the attention of persons whose time and pursuits have not allowed them opportunities for keeping pace with the advances made in biological investigations, especially those in reference to the bacteria, or minuter forms of microscopic life (the so-called micro-organisms), it will be quite proper, therefore, to sketch briefly what is meant by the term "germ-theory of disease."

It is known to all that the atmosphere and the surface of the earth to a limited depth swarms with living forms or organisms, exceedingly minute and invisible to the naked eye, and in large numbers, only visible by microscopes of the highest powers.

The terms "bacteria" (so called from likeness to minute particles of fibre or thread) and microbes (small things) are properly used, in a general way, to designate any and all kinds and forms of these microscopic organisms."

The term "bacillus" (plural *bacilli*) has a rather more limited use, and is more properly applicable for the purpose of designating particular disease-germs, although not restricted to such use.

Bacteria are not confined to the earth and the air, but exist in countless numbers in impure water, and to some extent in fairly good and entirely safe water for drinking purposes. They are found upon and in our food, in the fluids and tissues of human bodies, and in other animal and vegetable organisms. There are bacteria that are harmful, and there are bacteria, in immensely large numbers, that are not only harmless to animal and vegetable life, but play a very important and useful part in the economy of nature, the extent of which is one of the great problems of the day.

We as yet have but a very limited knowledge of the extent of their action in the surface of the earth in the preparation of the soil for vegetable sustenance and the promotion of vegetable growth ; their action in the soil and elsewhere in the decomposition and disinfection of putrefactive material ; their action in the stomach and other organs of mankind and the whole animal kingdom in the digestion and assimilation of food ; their action in the destruction of the noxious properties of the waste of bodily tissues and fluids worn out by exercise and living organic action ;—in fact, the ways are numberless in which the great body of bacterial life is believed to exert beneficent action in the support of life and in the purifying (as well as in the decomposition) of the material products of death. And in the meantime the germs are themselves subjected to self-destruction as well as self-propagation, in accordance with the natural law of universal existence, of life always—dependent upon and supported by death, and death the ever and inevitable result of life.

It is not only that the stronger or more intelligent creatures exist by devouring, directly or indirectly, the weaker or less intelligent, but the lower and most minute forms or orders of living things invade the higher forms of life and a struggle ensues ; and if the invaders are of a hurtful kind, and are not at once destroyed by the resisting vitality or forces of the body invaded, they sooner or later increase greatly in numbers and feed upon the substance of their host, and by their destruction of substance, or by the irritation caused by the greatness of numbers, or by the production of poisonous compounds from their own secretions or otherwise, derangements of organic functions or destruction of organic tissues, and sometimes both, ensue, and unless the lives of the invading myriads are self-limited or they are destroyed by their own products, or the resisting vital forces of the body invaded, disease occurs, and ultimately, be the period longer or shorter, generally ends in death.

The germ-theory of disease is founded upon the facts of the invariable presence of certain micro-organisms or germs in or upon the bodies of individuals, animal or vegetable, affected with certain diseases—the same germs invariably associated with the same diseases; with the additional facts, also, that the same diseases are caused in other individuals by inoculation with the same germs, or by their introduction into the lungs or air-passages by inspiration, or by their reception into the stomach or other alimentary organs of living bodies.

The germs are so extremely minute that in many instances they can traverse muscular and membraneous tissues through their interstices, and thus reach all parts of the body invaded.

In 1882, Koch, further elucidated the subject of tuberculosis in man and other animals by the description of the disease-germ, or microbe, which he denominated *bacillus tuberculosis*—the specific cause or pathogenic germ of consumption. He found this parasite present in every case of scrofula and tubercle both in man and the lower animals, and in over a hundred rabbits and other animals which he had inoculated with it. After the isolation and description of this microbe, Villemin and Klebs followed with experiments to demonstrate that the tubercle of man, when inoculated into animals produced pulmonary consumption in them, which was also transmissible in the same manner. Chanocan, Toussaint, Sanderson, Cohnheim, and many other investigators both foreign and American, have supplemented these experiments with many others of a more or less convincing character, and establishing the existence, at least, of a microbe, or bacillus, which *is always present in every original and inoculated case of tuberculosis*. This declaration has been made by so many able scientists that it is not for an instant to be doubted. Besides, this bacillus has been cultivated, and whether it has been derived from man or other animals, "always shows the same form and the same habits during culture, and an inoculation has produced the same pathological lesions, implying the essential identity of the two."

RELATION TO MANKIND.

Lydtin after very extensive observation and investigation concludes as follows:—

"1. That tuberculosis has been observed in all warm-blooded animals submitted to domestication or deprived of liberty."

"2. Tuberculosis of animals and of man present analogous manifestations in the living and in the cadaver."

"3. The cause and termination of the two maladies are the same in man and animals."

"4. The tubercular masses, and, above all, the expectoration of phthisical men determines tuberculosis in animals when these masses are introduced into the latter by the respiratory or digestive apparatus, or by a deep wound. Tuberculosis inoculated from man to animals can be thence-forward transmitted from one animal to another, producing in all cases tuberculosis."

"5. Tuberculosis is as contagious (communicable) to man as it is to animals."

It is demonstrated that a pathogenic microbe having the same morphological and biological characters, exists in the tubercle of man and in animals. This organism whether developed in man or animals, can produce tuberculosis when cultivated in a state of purity, it is transmitted to a susceptible animal."

PHYSICAL CHARACTERISTICS.

Anatomy and Pathology. The primary lesion in tuberculosis is the tubercle now to be more particularly described. Tubercles were formerly divided by pathologists into several varieties. But this division has now been abandoned. A tubercle is a "non-vascular (without blood vessels), gray, semi-transparent nodule, of moderately firm consistence, and well defined spherical outline, varying in size in the lower animals from a millet seed to a pullet's egg. It consists of cells of various sizes, branched, roundish, transparent and without color, all these cells are found imbedded in a network of delicate fibres, so delicate that they can only be seen with difficulty, or in a transparent homogeneous mass. "These cells are also filled with nuclei and nucleoli. Forty of these enclosed masses or nuclei have been counted in a single cell." [1]

Tubercles are found either single or grouped in masses of an irregular character. The latter a careful examination will determine to be composed of groups of tubercles. They are subject to changes break-down, harden and sometimes become yellow, hence the "yellow tubercle," as it was called. Sometimes the tubercle wastes and dries up instead becoming caseous, and so producing a favorable termination of the disease. In the case of the yellow or caseous tubercle it may soften or be converted into a dry mass. If it softens, it becomes changed into a puriform fluid, of the consistence of soft curd. When situated in "a mucous membrane, the softened matters are eliminated and an ulcer is formed." When the lungs or lymphatics are the seat of the disease a pseudo-abscess is the result. They may again become calcareous or chalky concretions.[1]

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[1] Witkin's Vet. Med. pp. 270, foll.

Tubercles are found in various organs of the body. In the lungs they first appear in the cortical substance of those organs, and then multiply and extend deeper into their substance. The air cells may become effaced and large portions of the lungs waste and are replaced by the morbid product. These masses of tubercles may increase to such a degree that the lobes of the diseased lungs in cattle may increase from three to five times in weight, weighing from forty to fifty pounds.

Other pathological changes are the production of large cavities or *vomicæ*, due to ulceration and destruction of the lung tissue, or rather to the breaking up of the tuberculous matter. These cavities vary in size and may be rather larger than a walnut.

In addition to the pathological changes connected with the growth and softening of tubercles, we note larger dilatations in the lungs due to bronchitis, the result of a former inter-lobular pneumonia, and the morbid products left in pleuro-pneumonia; and also what we might find as the result of acute and chronic pleurisy.

Tubercles may be situated in all serous membranes. On the costal-pleura, lining the cavity of the chest, (the inner face of the ribs), it is not unusual to find the whole surface completely studded with these tubercular growths. The entire pleura is always liable to be their seat, often the peritoneum. In the pleura they form great number of tumors, sometimes as large as an apple, and may even acquire a weight of as much as twelve or fifteen pounds. These pleural tumors may show the three states of the disease, the new tubercles being on the outside, the calcareous, or chalky concretions, in the middle, and the softened and broken down mass on the inside. We often besides, find calcified layers of tubercles in the lungs.

The lymphatic glands of the bronchial tubes are seldom free when the disease is present anywhere, the glands of the chest, mesentery, and sub-lumber regions often show their presence. Tubercular nodules are also found in the liver and spleen, though here they are not so numerous, nor in such large masses as in the lungs or pleuræ, they may also appear in the kidneys and other glands. The muscular and osseous system are but seldom affected; though what has been called *Muscular Tuberculosis* is claimed to have occured. The intestines, uterus, and especially the udder are other seats of the disease. Nodules of tubercles also appear in the mucous surfaces of the windpipe, larynx, pharynx, and gullet. Sometimes the brain and spinal cord may become the seat of the disease, though the investing membranes are the more often invaded, nervous phenomena of course follow such lesions, and the brain substance becomes puriform and softened.

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[1] Witkin's Vet. Med. pp. 270. foll.

When tubercular nodules are found in the coats of the bowels of cattle, they are also found on the inner surface of the peritoneum and in the mesenteric glands from the size of a millet to a hemp seed; when occuring in swine the disease is known as scrofula and sometimes as enteritis.

Miliary (fine) tubercles, singly or in clusters, also invade the liver, spleen, sometimes the kidneys and bladder, less commonly the generative organs and mammary glands. The muscles are occasionally affected. If the bones are the seat of the disease, it is usually the extremities, the bones of the cranium, and the ends of the bones of the back.

The lungs, however, the pulmonary and pleural surfaces, and peritoneum are the parts are chiefly affected. Generalized tuberculosis is less common.

In the advanced stages, the muscles are pale and flabby and the blood of poor quality. It is largely a disease where the nutrition, and assimilation of food, are defective. The 'wasting' of the animal shows this.

The question now is, whether it will be safe to utilize the milk and flesh of such animals for food, and in what stage of the disease, if at any time, this may be done with impunity.

This subject will be discussed further on.

SYMPTOMS AND COURSE.

Tuberculosis, as observed among our domestic animals, is very largely confined to the bovine species, and particularly to milch cows. Being a disease of an insidious character, every effort must be directed towards the just appreciation of its approaches, and due attention paid to animals, which exhibit the earliest symptoms of the malady, so that they may be placed immediately under the proper surveillance.

Rational Symptoms. Owing to its insidiousness the primary symptoms of tuberculosis, as in man, are very obscure, and many months may pass by before there are any external or apparent manifestations of the disease. Thus it often happens that tubercles are found in the lungs and other tissues of cattle, slaughtered for the markets, and which during life never manifested any symptoms whatever of their presence. Hence it becomes a matter of the greatest difficulty to detect the first signs as it were of this affection.

The premonitory symptoms are, therefore, very slight. There is manifested by the animal comparatively little or no sickness. This condition may last for months and even years; and the animal may live its ordinary lifetime without exhibiting any external signs of the affection. The milk may continue to be abundant and lose none of its good qualities. In short, the diseased animal is capable of being fattened.

On close examination, however, in the early stages of the disease it will usually be noticed that the temperature is low in the morning and gradually rises towards evening. The animal gradually, and slowly, becomes dull, listless, "logy," or feeble. In the case of the cow continuous nymphomania, or heightened sexual desire is sometimes developed. Cows, laboring under tuberculosis frequently abort early; while the calves, if dropped at term, are often feeble and puny, and inherit the disease from their mother. Their milk, after a time, where the disease is more advanced, becomes thin, more watery, and of a bluish color.

The appetite frequently becomes somewhat capricious, or fails them. Cattle sometimes though rarely do not eat anything for two or three days together in the early stages of the disease, when of an acute form.

As the disease advances, slight wasting begins to be apparent, followed sometimes by colics, tympanites, diarrhœa, or constipation. Sometimes nervous disorders are exhibited, as cramps, paralysis, wry neck, epilepsy, coma, blindness, diseases of the generative organs, and the udder in the cow, affections of the bones, glands, and skin.

A dry, slight cough is noticed when the animal passes from a colder to a warmer temperature, and the reverse. There is sometimes a nasal discharge of glairy mucous. This cough may be induced by pressure on the windpipe in the early stages of the disease. Glandular swellings of the limbs produce lameness; the lymphatics of the neck also partake of the affection.

The horns and ears are often at first somewhat hot and dry. These afterward become cold. The respiration becomes hurried, the heart beat increased in force; and the emaciation becomes more marked.

The skin is frequently hot and dry to the touch, and looses its elasticity; the coat also of the animal loses its luster.

There is often excessive perspiration, which corresponds to the night sweats of consumption in man.

As the disease progresses the animal commonly endeavors to relieve its sufferings by carrying the head close to the ground. Diarrhœa or else constipation is more frequent.

The expectoration increases, and is of a more purulent character, sometimes containing yellowish, cheesy looking substances in flakes. There is not always an offensive odor. Difficulty in breathing is present of various degrees of intensity.

As the disease becomes more developed, the hectic fever is absent but a short time during the twenty-four hours, and adds to the emaciation. The cough is more constant; the tongue hangs from the open mouth; the back arched; the head held low; a prolonged moan is emitted at nearly every breath, digestion fails entirely, and the diarrhœa becomes fœtid as the animal approaches the end.

Physical Signs. In the early stages of the tuberculosis the walls of the chest are sensitive on percussion; and the animal sometimes resists such pressure and draws back. Later on percussion shows dulness in various parts of the lungs. But this differs in different parts, according as the parts are more or less solidified. Little besides tenderness is evinced by this method of diagnosis.

Auscultation yields greater information. The respiratory murmur is sometimes of a rasping, grating, harsh character, or loud and blowing—bellows murmur. Sometimes it is interrupted. In some parts this murmur is louder than in others. We hear all sorts of noises, or rales, mucous and sibilant rales, bubbling, rattling, crackling, and sonorous sounds, resulting from the air passing through the mucous and other matters in the bronchial tubes. The respiration is labored and interrupted.

All these sounds are best heard in the anterior part of the lungs. The way in which to hear these sounds to the best advantage, is to carry the fore limb of the animal well back, in such a manner as to expose the first ribs, and the middle zone back of the shoulder, as far back as the ninth or tenth ribs. They are heard also well in the upper zone; in the lower they are lost.

The heart beats strong; pulse is rapid, small, thready.

In fine the signs here noticed are identical with those observed in man when laboring under the same affection.

Differential Signs. Tuberculosis is not, especially in its early stages, easily diagnosticated. The differential diagnosis must therefore necessarily be left to the expert veterinarian. The persistent cough, first attracts attention to the disease ; emaciation and glandular swellings in the later stages. The only certain and truly pathognomonic sign is the presence of tubercles or parts of their contents and especially the presence of the bacillus tuberculosis in the sputa of the affected animal. The microscope determines this point. Such an examination should always be made in every instance where the disease is suspected. The further culture of these tubercles, and the proof of their virulent character established by their inoculation into other animals, should never be neglected in any case of doubt in diagnosis, where human health or large interests are at stake. The microscope has thus become the sole means of arriving at accurate diagnosis so necessary to the determination of the proper treatment of other diseases as well as this. The demonstration of its alleged germ—*bacillus tuberculosis*—then, is the indubitable proof of the existence of this affection. This evidence, added to the symptoms, is sufficient for its proper appeciation and treatment by the veterinary sanitary police, under whose surveilliance alone this disease should come.

Prognosis. The disease may be fatal in two or three months or last the lifetime of the animal ; or the animal may be carried off by other diseases, as of the lungs and pleuræ which are complications of tuberculosis.

After a conclusive diagnosis, under favorable circumstances, with proper attention to food and keeping, and to the securement of the best hygienic measures, death may be delayed for a year or longer ; though sooner or later it must end fatally. When it seems to have been checked by the calcification and encystment of the tubercles, and hopes are entertained of the ultimate recovery of the animal, by the best attention, and the best sanitary and dietetic measures ; a change of food, error of diet, over work, or fatigue, will at such time canse the disease to break out with renewed activity.

The duration of the disease depends upon the organ affected. So long as no important organ is the seat of the affection it may lie quiescent for a very long time. As soon as the lungs are very much corroded the end is near. The greater the emaciation and fever the nearer the approach of death. The same sad history may be traced in the case of tuberculosis in man. There is no hope of any recovery. We only trust that the disease may be inclined to remain quiescent.

Fleming observes that, "tuberculosis is recognized to be an essentially chronic disease, but not absolutely fatal; many animals are affected with it during their whole life. If the morbific principle does not attack an organ essential to vegetative or animal existence, the animal may render all the service of one which is in a good state of health; it may produce calves, furnish milk, perform labor, and even become fat. If the centre of infection is very limited, encysted or isolated, calcified or cretified, the animal will enjoy relatively good health, and perform its functions as if perfectly well."

TREATMENT.

The treatment of tuberculosis in the lower animals, as well as in man, is of two kinds, namely, curative and preventive.

Curative Measures. Here when the disease is incontrovertibly declared, little medication is called for. The relief of distressing symptoms is about all that can be done. Being at that state an incurable affection our chief treatment is merely palliative. In the early or suspected stage, easily digestible, and nourishing food, with due proportion of fat and starch, linseed meal and corn, pea flour, small doses of linseed oil, tonics, of which iron is the best, are all of considerable value. But according to Williams,[1] if the affection is nigh its later stages there is no use in the adoption of any form of treatment; it is but a waste of time and money. If it is desired, there may be given, in addition to the above food, oil-cake, cod-liver oil, (from six to eight ounces daily), but not to purge. The oil is best given in lime water (half and half). Oil of turpentine, in small doses, will prevent diarrhœa, tympanites, colics, and other forms of indigestion. The use of grasses and roots should be avoided as they tend to produce diarrhœa and other forms of indigestion. Fattening food only should be given. Cows should no longer be milked. Such animals are only suitable for the butcher.[2] Whether animals laboring under any form of the disease should in any case be killed for the market, is a question which will be discussed further on.

Preventive Measures. Our sheet-anchor of hope for the stay of this terrible malady, whether exhibited in animals or in man, seems to lie in the adoption of certain preventive rather than remedial measures. These measures have been founded upon the nature and character of the disease, and its modes of invasion and propagation, according to all the investigations of recent experimenters, some of whom have already been mentioned. They are of two kinds, sanitary, and suppressive or restrictive, as regards the animals themselves and their relation to the public health.

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[1] Veterinary Medicine, page 280.

[2] Ibid.

Sanitary. Under the first head come general hygienic measures, relating to proper food and drink, open-air exercise, good condition of stalls, clean, warm, well-aired; protection from weather, avoidance of too early breeding or excessive work, and in the case of cows, they should not be forced in the production of milk. As tuberculosis has been found to be hereditary, animals showing any symptoms of the disease should not be bred from.

Suppressive and Restrictive. In regard to suppressive or restrictive measures, it will be quite to the point to quote the views given on this subject by Lydtin at the Congress of Veterinary Surgeons held in Brussels, September, 1883. Substantially, the same propositions were considered at the International Veterinary Congress held in Paris, July, 1888. They will be referred to again on a subsequent page.—"The measures that ought to be adopted for this purpose are the following:"—

a. "Every owner of domestic animals must report promptly to the authority charged with this police service every case of tuberculosis, and any symptom causing suspicion of the existence of this affection, he must keep every animal attacked or suspected out of any place where it may be able to transmit the malady. [Every keeper of a herd of cattle, or other domestic animals, drivers, farmers, breeders, butchers, or any person who has to do with cattle and other domesticated animals, as well as veterinary surgeons, should report the disease wherever it is suspected.]"

b. "The appearance of the affection and the particular herd infected ought to be published."

c. The suspected as well as the diseased animals should be sequestrated, and their slaughter ordered by the police, animals suspected of being infected should be kept in quarantine, unless there are comparatively few, in which case they should be slaughtered by official order. If a large number are suspected, they may be fattened and sent to the abattoir as quickly as possible."

d. "Infected stables and other places should be under the special surveillance of the police [sanitary] for an entire year, counting from the last case of the disease. The sale of beasts suspected of infection should be interdicted, unless it is for slaughter, and under the inspection of a veterinarian."

e. "The place occupied by a tuberculous animal ought to be cleansed and disinfected, the animal having been previously removed; it ought to be the same when the malady has disappeared from stables and other closed places in which tuberculous animals have been kept; it is only after disinfection that the prescribed police measures should be removed. During the whole course of the panzoöty the stables should be especially well ventilated."

f. "The flesh and viscera of a tuberculous animal can only be utilized for consumption when the disease is found *in the cadaver* in its incipient stages, when the lesions are confined to a very small portion of the body, when the lymphatic glands are still free from all morbid tuberculous lesion, when the tuberculous formations have not yet undergone softening, when the flesh presents characters of meat of the first quality, and when the animal is in a good state of nutrition at the time of slaughter.

It should not be permitted to remove the fleshy tuberculous animals, admitted to consumption, out of the locality, where they have been slaughtered, and it should not be offered for sale in the ordinary butcher's stall."

Every quarter of meat and all viscera showing lesions of tuberculosis, as well as the flesh of any other animal in which there is found at the necropsy a tuberculous infection more pronounced than that referred to above, should be well sprinkled or thoroughly saturated with petroleum, and afterwards buried under police supervision or permit. The extraction of fat by cooking and utilization of the skin may be permitted.

The inspection of every animal attacked by tuberculosis should be made by a veterinarian, who alone should decide if the flesh is fit for human consumption.

g. "The milk of animals suffering from tuberculosis, or suspected of it, should not be consumed by man nor certain animals. The sale of such milk should be severely interdicted. The milk of animals suspected of infection should only be used after boiling."

Lydtin proposes that indemnities should be paid to those whose cattle have been slaughtered by official order, or have been found "to be tuberculous after they have been killed for human food." Indemnities were also to be paid those who had lost animals by this disease. Violators of this law should be punished.

h. "Establishments which make a speciality of furnishing milk for invalids, or for infants, ought, as regards these milch animals, to be submitted to a constant control, confided to veterinarians officially designated for this purpose."[1]

The Congress of 1883, adopted by vote paragraph *f.* of the measures proposed by Lydtin.

Thus it is shown that too much attention cannot be given to this subject, but that every means should be resorted to, to bring its importance before the general public. Besides the public authorities should be urged sufficiently to take this matter into full consideration and limit the spread of tuberculosis by all such available legal means, as veterinarians may advise.

These views were reiterated at the last Congress in Paris, July 25–31, 1888.

FOOD QUESTION.

The use of the Flesh and Milk of Tuberculous Cattle as food. This question has received great attention and met with both extreme and moderate views; some advocating total destruction of animals manifesting the least taint of the disease, and others only when general tuberculosis shows itself.[2]

No better authority can be presented when treating this topic than the views of Chouveau, the great French authority in this matter, and of Nocard whose opinion is no less to be respected.

On the reassembly of the International Congress of Veterinary Medicine at Paris, July 25, 1888, there were discussed among many questions the "dangers attending the use of the flesh and milk of tuberculous animals—and the means of preventing such dangers." The views of Nocard, who presented a paper on this subject for discussion, will afford us sufficient information in this particular.

According to his understanding every one was now agreed as to the use of the milk from tuberculous cows. To be on the safe side, whenever we find the udder of the cow tuberculous to any extent we should not use the milk. "But as there is no greater difficulty than in determining tuberculosis of the udder in the cow, in the early stages of the disease, since it is always impossible to say with positiveness this gland is or is not infiltrated with tuberculous granulations, we must act in respect to phthisical cows as though the udder was always attacked by the lesion. Boiling is, virtually, the only practical and sure method of protecting ourselves from the great dangers from the use of tuberculous milk, as the milk sold in all the large cities is of a suspicious character, since we do not know its source, nor is its supply subjected to any sort of inspection (not so with us), we must not cease crying 'Mothers, give no milk to your children without boiling it!'" "If we are not sure of good cow's milk one had better have recourse to mare's milk as this disease is rare in horses." Such recourse is obviously impracticable in this country.

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[1] An. Rep. of Bureau of An. Industry.

[2] See paragraph f. on page 23.

As regards the employment of tuberculous meat for food he presents his views as follows :—He first adverts to the views of Toussaint a celebrated veterinarian and scientist who considered the least taint of tuberculosis was enough to affect the whole body (totius substantiæ) in every part. In all the tissues and fluids may be found the germ of the disease. Every tuberculous cow was thus regarded as dangerous to the public health and the use of its flesh as food to be prohibited.

Lydtin. was the first to oppose these views. His opinion has been already given. By a special committee, at this Congress of some of the most celebrated veterinarians in the world, the subject was deliberately considered, and the conclusions were that the flesh of tuberculous animals should be forbidden to be used as food only under the following conditions, viz. :—

1.—"When the lesions are general, that is, are not confined exclusively to the visceral organs and their lymphatic ganglia.

2.—When the lesions, even though but local, have attacked the greater part of any viscus or showed ulceration or a disruption on the walls of such organ, or in the abdominal cavity.

Such flesh should not be given even to animals for food, but should be destroyed."

Nocard supports these views, and shows by the report of many experiments, the necessity of legal provisions therefore. He established experimentally, that :

1.—"The flesh of tuberculous animals *can*, under certain circumstances, offer some danger.

2.—But it is only exceptionally hazardous.

3.—When it is dangerous it is always so to a very limited extent." The muscular tissue and the blood are the least likely to be tuberculous long and are seldom dangerous. He considers that the consumption of the flesh of tuberculous animals plays a very small part in causing the disease in man. Other French authorities, among whom is Chauveau, discountenance the use as food of tuberculous animals, "whatever be the gravity of the specific lesions," and advise the seizure and destruction of such animals.[1]

English veterinarians, among whom may be cited Fleming, advocated more moderate views.

Fleming (1875) says that "any danger to be apprehended from the consumption of the flesh of phthisical cattle, may be obviated by thoroughly cooking it." These animals "suffering from advanced pulmonary or mesenteric tuberculosis should not be utilized as food for man or valuable animals, though for some of the latter it might be made available after being well-cooked; and in the case of cattle affected with this disease, though in tolerable condition, great care should be observed in removing and destroying all the affected tissues or organs."[2]

Of course the microscope must determine for us in doubtful cases, while living, whether or not an animal has consumption. The vomited matters and sputa before death; after death the muscles, mesenteric glands, pleural cavities, and lungs, will afford a sufficient diagnosis.

The flesh of phthisical cattle is always of an inferior quality.

PREVALENCE IN RHODE ISLAND.

The occurrence of so large a number of cases of tuberculosis among the neat-cattle comprising the herd at the State Farm, during the early months of the year 1887, was the occasion of an awakened interest in the subject of bovine tuberculosis, which, until then, had been but slightly considered by the average citizen of the State. The interest thus awakened led doubtless to the passage of the resolution calling for this report, and also led to an increased interest on the part of the State Board of Health.

The disease had been under the surveillance of the writer in some measure for several years, as the executive officer of the State Board of Health, acting as a Cattle Commission. Having an active interest in the diseases of the domestic animals of value to the various industries of the State, and an interest particularly in such diseases as had especial relation to human health, of which tuberculosis was the most prominent, had caused his attention to be paid to the occurrence of cases of tuberculosis whenever notices of such disease were obtained. Such notices were however very infrequent and then chiefly through the courtesy of the veterinarians. The infrequency of such notices and the small number of animals found affected with tuberculosis to which the writer had given personal attention and investigation, had led to the belief that the disease had no extensive distribution in Rhode Island.

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[1] For this part of our subject see, Rec. de Med. Vet. vii. Ser. Form v. pp. 485x and pp. 569x.

[2] Vol. ii. p. 393x.

After the occurrence of the circumstances referred to above, and especially after the reference of the matter of the preparation of a report was assigned to him, it was a question with the writer as to the adequacy of the facts already known as a basis for a correct statement of amount or extent of prevalence in Rhode Island. It was obvious at once that the facts then known would not warrant a definite statement.

METHODS OF INVESTIGATION.

In order then to ascertain with the greatest available degree of accuracy, the extent of amount and distribution of the disease in the State, various methods were adopted, of which the following were a part.

A large poster was prepared with the heading,

"TO CATTLE OWNERS,"

calling attention to the resolution of the General Assembly in relation to tuberculosis, and especially in regard to its prevalence, and asking for information from them pertaining to the disease, giving all the facts of which they had knowledge which might assist in determining the amount and extent of prevalence.

In this poster there were described the most prominent symptoms of the disease, such as would attract the attention of the average observer, and assist in the detection of its presence.

Suggestions were made as to the way by which such information, or notices given the Secretary of the State Board of Health, as requested, might be of pecuniary interest to the owners of cattle.

About 1800 of these posters were put up in the most conspicuous places in every city and town in the State, including stores, grist mills, blacksmith shops, wheelwright shops, post-offices, open sheds, etc.

TO VETERINARIANS.

A circular was also sent to all the veterinarians in the State, making inquiry as to their experience with the disease among neat cattle, the locality of the herds wherein the disease had been found, the average number by estimation yearly seen during the previous three or four years, the suspected as well as confirmed cases, and their opinion as to the distribution of prevalence and proportion of suspected cases to the whole number of apparently healthy animals.

TO BUTCHERS.

A circular was also sent to all persons in the State engaged in the slaughter of animals—the butchers—describing the appearance of the internal parts of the bodies of animals affected with tuberculosis, the structure of the tubercular growths, the so called nodes, nodules, cheese-lumps, chalk-lumps, etc., and asking for replies on postage paid blanks, as to the proportion of the neat cattle slaughtered by them, which presented the appearances described, the estimated average age of such, and the breed of the larger number as well as could be remembered. Inasmuch as only a small proportion of the cows held in the State for the production of milk were raised within its borders, and that tuberculosis was in a considerable measure a hereditary disease, it seemed eminently proper that the investigations of the disease should extend beyond the limits of the State and particularly into those sections from whence our supply of milch cows are most largely derived.

TO CATTLE DEALERS.

Following this line of inquiry, the cattle drovers and dealers of this and neighboring States were interviewed; visits were made to Brighton and Watertown in Mass.; the names of cattle collectors bringing stock, and especially milch stock, from Maine, New Hampshire, Vermont, and Northern New York, were ascertained; some of them were conferred with and a correspondence opened with others. Some of the veterinarians and members of the Boards of Cattle Commissioners in the same States were also reached by correspondence.

PERSONAL VISITATION.

With the more direct and practical results of personal visitation of herds in different parts of the State, and conferences with veterinarians and cattle owners at the office and wherever met, in addition to the methods presented above, an outline is given of the general plans of procedure in the investigation of the prevalence (at the present time, and probable prevalence in the future) of tuberculosis in Rhode Island.

An account in detail of the conferences, correspondence, and personal visitations would obviously greatly extend the number of pages and be out of place in what was at the beginning designed to be practically a summarized report.

RESULTS OF INQUIRIES.

Briefly then it may be stated, that so far as the information obtained from a majority of the cattle owners and dealers was concerned, whether in this State or any other, it was to the effect that in their opinion, tuberculosis had but very limited, if indeed, any prevalence in the localities of which they had knowledge and that they had doubts of its having any extensive distribution in this State or any of the States north of this, from whence the supplies of milch cows chiefly came.

It was generally admitted that there might be and to the knowledge of some of them there had been a few centres in each State where the disease had obtained a foothold with destructive results, but that such occurrences were very infrequent and had caused a great deal of needless and doubtless much harmful alarm. It was also generally admitted on the part of this class of informers, that they were not very fully conversant with the conditions and the characteristics of the disease and that possibly, or perhaps, they might have seen some animals affected with tuberculosis, which they at the time considered to be affected with some other ailment. There was however a fair proportion of the same class of persons, who recognized the gravity of the disease, the possibly larger prevalence and more general distribution of it than had been supposed by the average owner of stock, and with the expression of a disposition to co-operate with any and all parties, in the effort to restrict its extension or if possible to stamp it out.

VETERINARIANS.

Conferences and correspondence with the veterinarians of the State furnished information, which, while disclosing differences of opinion as to the amount of prevalence of tuberculosis among the neat-cattle of their respective localities, was, as a whole, much more definite and confirmatory of its actual presence than that given by the cattle-owners and cattle-dealers.

The veterinarians of Providence county (comprising mainly the eastern half), in regard to the probable proportion of the milch cows above six years of age affected with tuberculosis to a greater or less extent, in comparison with the whole number of such animals, varied in their estimate of from one in every thirty-five or forty to one in every ten ; or, in other words, of from about three in every hundred to ten in every hundred.

The estimated proportion for the rest of the State, making an average of the various opinions, was that of about four in every one hundred.

In Massachusetts, the State Veterinarian estimated the proportion of milch cows above five years of age affected with tuberculosis in some degree at ten in every one hundred. The estimate was for the section of the State east of the Connecticut river. Other veterinarians in Massachusetts estimated the proportions at from five to ten in every hundred.

In Connecticut, the estimates by the professionals were rather less than those given in Rhode Island.

In the northern tier of the New England States, the veterinarians seemed to entertain the opinion that while there was an occasional outbreak at some foci of infection, at very infrequent intervals and long distances apart, and from no clearly obvious cause, there was at the same time and all the while no diffused distribution throughout the States. It would hardly be courteous to assume that it might be possible that self-interest, so potent and so inherent in the human mental constitution, could unconsciously affect or qualify the opinions given.

BUTCHERS.

Circulars were twice sent to the parties engaged in the slaughter of cattle for food, the replies to the first sending amounting to twenty-six only. In the last circular it was stated that the names of the parties replying would not be given to the public, and whether because of that assurance, or whether from some other cause, the second effort resulted in more general replies.

The replies, taking the whole collection, presented unexpectedly different and widely different statements. Parties in the same town, and located at no great distance apart, sent replies as follows :

"Have never seen anything of the kind."

"None; not one."

"Have seen but one in a year."

"About one in ten."

A considerable number of these replies—nearly one-half, and from different sections of the State—were to the effect that from year to year some of the appearances described in the circular were seen in the cattle slaughtered by them in the proportion of about one in every twenty to twenty-five. About one-quarter reported, "about one in ten," or "about one in fifteen." Of the remainder of the replies, no such lumps, knots, nodules, or other described appearances, had been noticed; or if noticed they were not more than one in a hundred or a less proportion than that.

Three butchers reported having slaughtered cows, in a very few instances, which were so extensively diseased with the appearances as described in the circular that the carcases were buried as they were found, and no part used for food.

It was a general remark in most of the replies of the butchers that the number of lumps, large or small, found in the lungs, liver, heart-case or elsewhere, were not usually very numerous.

It will be understood that nearly all or much the greater number of the slaughtered neat-cattle were milch cows and calves, the slaughter of western beef-cattle for the market having been almost entirely superseded by Kansas city and Chicago dressed beef.

It was also generally stated that the cattle in which the tubercular growths were found were cows of over five years old, and more frequently of from seven upwards.

No statement was made of having seen the described appearances in calves.

One butcher reported having seen lumps or light colored cheesy spots in the livers of fat sheep.

From the information derived from the sources stated above, and from personal visitation and examination of herds in various sections of the State, and from the results of autopsies requested and permitted, and of autopsies to which personal attention was called by owners of cattle, and from the known results of introducing into a healthy herd an animal having tuberculosis, the writer has been reluctantly compelled to estimate the proportion of milch-cows in the State, above five years of age, which at this time are affected with tuberculosis in some degree, as one to twenty, or five in every one hundred.

In the greater number, however, the cows that are affected are seven or eight years of age, have seen their best days as milkers and as reproducers of their kind, in short, have deteriorated in all their physical capacities and are on the down hill of life.

INFLUENCE OF BREED.

In regard to the breed of cattle most liable to tuberculosis, it may be said that in the different sections of the State there was a difference of opinion among the parties, including cattle-owners, veterinarians and butchers. In Providence county, the preponderance seemed at first to lay the heaviest against the Jerseys and Jersey grades. There is, however, some doubt as to the greater natural liability of the Jerseys. In Providence county there is a larger proportion of cows of that strain of blood, or so represented, in the class of herds where the forcing processes are resorted to for the purpose of producing early maturity of development, early propagation of species, and the fullest amount of the secretion of milk.

There is a limit (it need scarcely be said), to which the methods for obtaining largeness of early growth, undue precocity and present utility may be employed, without prejudice to the physical stamina or constitution of the animal, or, in other words, within the promotion not only of the best health at the present time, but for the preservation of the best health indefinitely, and the ability to transmit good constitutions to their progeny. It is quite probable that the Jersey stock, if indeed there have been more cases of tuberculosis in proportion to numbers in that breed than in others, has acquired the unfortunate pre-eminence by too early breeding and too luxurious living. Cases of tuberculosis have been found in all breeds. Natives, Durhams, Jerseys, Ayrshires, Holsteins, so-called Herefords, Devons, etc. Taking the State at large, more butchers have reported Natives than of any other breed. It should be taken into account, however, that they would not be likely to take particular notice of the evidences of breed, while actively engaged in their business pursuits.

From personal observation the writer is doubtful if any large difference exists in the different breeds of neat cattle as to liability to tuberculosis. The liability seems to be much more largely dependent upon an inherent hereditary influence, and on methods of raising, feeding and care, in which all breeds share alike. Hothouse culture, or any near approaches thereto, is not natural to the bovine species, and will assuredly tend to the development of tuberculosis in any breed of neat-cattle, by weakening the physical forces of the animal, and thereby inducing a bodily condition favorable to the multiplication of tubercular bacilli, if once they obtain a settled lodgement within the system, by inspiration, or by the ingestion of food or drink, and especially by favoring a tubercular development in such animals, if any exist, as inherit a predisposition thereto, independent of the hereditary and congenital transmission of a living bacillus.

The fact of a state of entire quiescence or dormancy on the part of the specific agent or cause of tuberculosis, or in the arrest of progress of the development of tubercular growths, for indefinite periods of time, is not at this day questioned, although the cause of such dormancy or arrest is not always apparent.

This fact reconciles the so-called doctrine of hereditary predisposition with the proposition that an animal at birth may bring with it, inherent in its organism, a living agent or cause of tuberculosis, which may properly be called the "bacillus tuberculosis," that the bacillus may have been transmitted from the mother to the fœtus in the womb, or possibly conveyed in the ovum of impregnation, and the bacillus may remain dormant in some part of the organism of the fœtus, or in the fully developed animal, until circumstances favoring its vital activity should occur.

CONCLUSIONS.

A consideration of the opinions of eminent veterinarians presented in the foregoing pages, and the results of personal inquiry and personal observations, seem to warrant the following propositions:

a. Tuberculosis is the most extensively distributed and most destructive disease now extant upon the earth.

b. Mankind and the lower animals are alike the victims of the disease.

c. Mankind and the brute creation are alike more largely susceptible to, and proportionately more frequently the victims of, the disease, under the circumstances of advanced civilization.

d. Tuberculosis is communicable from animal to animal and from the lower animals to mankind, and *vice versa*, under all conditions of existence.

e. The disease is communicable from animals to man usually by means of uncooked or partially cooked flesh and milk; from man to animals by the ingestion of the sputum of a consumptive person.

f. Tuberculosis is communicated from one animal to another by means of the ingestion of milk, or of the sputum or expectoration of an animal so diseased, or may be transmitted by heredity, and possibly by the inhalation of the breath of an animal affected with pulmonary tuberculosis.

g. A tuberculous animal, if introduced into a herd of healthy cattle, will often affect the whole herd sooner or later.

h. A healthy animal introduced into a herd of tuberculous cattle, will, usually, sooner or later, become affected with the same disease.

i. Tuberculosis may therefore be hereditary or infectious. The progeny of animals, so diseased, will sometimes show an incipient developnent at the time of birth, and at varying periods of a few weeks or months thereafter.

j. The specific cause or agent, (the bacillus tuberculosis,) may remain dormant in the progeny of tuberculous animals for several years under circumstances and surroundings favorable to the best health and most vigorous functional activity of the animal.

k. Close confinement in a very warm atmosphere, imperfect ventilation, lack of proper exercise in the open air, too early and too frequent breeding, the inter-breeding of animals hereditarily predisposed, the too free use of stimulating or fermenting food, the forcing methods for the greatest production of milk, deprivation of a sufficient amount of healthful food; in short, whatever lowers the tone of the vital powers, promotes the development of tuberculosis.

l. Usually the first noticeable symptoms, are, a short dry cough, (in occasional cases no cough occurs until the disease has reached an advanced stage), a shortness of breathing upon being hurried, tendency to premature birth or early dropping of offspring, swelling of the joints attended with lameness, nymphomania in cows; but an early positive diagnosis is in many cases impracticable in the living animal.

m. A positive diagnosis can be reached in the more advanced stages of the disease, when tubercular matter can be obtained and the inoculation of healthy animals therewith be resorted to.

n. In the later stages the rational symptoms, loss of flesh, unthriftiness of appearance, diminution and thinning of the milk, difficult breathing attended with cough, and especially if there is present any enlargement or tenderness of the udder, will declare the disease; and the milk of such animals can not be used with safety.

o. Upon the appearance of the earliest symptoms of tuberculosis, every cattle owner, for the public safety and his personal interest, should secure an examination of the animal by a competent veterinarian, and if the case is suspicious only, the animal should be isolated until a positive diagnosis can be made.

p. When an animal has been found affected with confirmed tuberculosis, public safety requires that such animal should be destroyed, and that those animals exposed to its infection, should be quarantined and watched.

q. The presence of tuberculosis among the bovine animals of Rhode Island, is a menace to the public health and prosperity of the State, and the General Assembly should provide compensation for the owners of such cattle as are destroyed to prevent the spread of such disease not only among cattle but among the citizens of the State.

r. Facts already known seem to warrant the assumption, that not less than five in every one hundred of the milch-cows in the State, above five years of age, are affected in some degree with tuberculosis.

s. The disease is much less liable to be communicated during the earlier stages, either by the milk or otherwise, the liability at all times depending largely upon the part of the body in which or upon which the tubercles are situated.

t. Immunity from the infection of tuberculosis through the use of flesh as food, may be secured by thorough cooking; and the milk of cows, by a half hour's boiling, may also be made safe for use as food.

GLOSSARY.

Signification of terms not in common use, but which could not well be avoided in the description of the various conditions and appearances given in the report.

Auscultation. Listening with the ear to hear sounds in the chest and other cavities.

Autopsy. Personal examination of a dead body.

Bacilli, plural of bacillus. Species of bacteria, having special forms and specific properties.

Bacteria, plural of bacterium. Minute particles of living matter, consisting of a cell or cells capable of reproduction or growth, by sub-dividing or throwing off similar cells and multiplying with great rapidity. They sometimes have cells within cells and other points of living matter, nuclei and nucleoli, supposed to have some property different from the inclosing cell. Bacteria are invisible to the naked eye; and nearly everything upon the face of the earth throughout the soil and sub-soil, and the lower stratum of the atmosphere, furnishes room for their existence in an infinity of numbers. There are bacteria that are harmless and doubtless of great service in the economy of animal and vegetable life, and there are bacteria that cause disease, and when thus known are usually called bacilli.

Biology, (description of life). Study of the nature and characteristics of living things. Science of life.

Bovine. Relating to neat cattle.

Cadaver. A dead body.

Calcareous. Like lime.

Calcified. Converted into lime.

Coma. Stupor, deep sleep.

Congenital. Condition at birth, inborn.

Cortical. External surface or covering, bark.

Cretified. Becoming chalky.

Diagnosis. The determination of the kind of disease.

Diagnosticate. To discriminate between diseases.

Differential. Detecting points of difference.

Etiology. Science, study or description of the causation of diseases.

Ganglia. Knot-like formations or enlargements of nerves and lymph vessels.

Hereditary. That which is derived from a parent or ancestor.

Heredity. Inheritance.

Lactation. Production of milk.

Larynx. Upper portion of the wind-pipe.

Lesion. Diseased place from injury or otherwise.

Microbe. (Little living thing). A bacterium or bacillus.

Morbigenous. Disease generating.

Morbific. Condition or causes of disease.

Morphological. Relating to form or shape.

Nuclei. Nucleoli. Plural of nucleus and nucleolus. Minute points of matter or granules in the interior of animal or vegetable cells. Cell germs.

Nodule. A knot, lump or knob.

Organism. A body having parts and capable of existence and reproduction,

Osseous. Relating to bones.

Pathogenic. Disease causing, or generating disease.

Pathognomonic. Disease naming.

Pathological. Relating to conditions of disease.

Pathology. Description of diseases or diseased conditions of the body.

Percussion. Striking, with the ends of the fingers collected together, any part of the body to elicit sounds.

Pharynx. Upper end of the gullet and back of the mouth.

Phthisical. Wasting. Consumptive.

Physical. Relating to the body.

Physiology. Description of the natural working or operations of all the organs and parts of the body.

Porcine. Relating to swine.

Predisposition. Previous inclination or tendency.

Prognosis. Foretelling or predicting the course or termination of disease.

Propagation. Extending or increasing by new growths, or additions of same kind.

Udder. The milk bag.

Viability. Capacity of living after birth.

Viscera. Plural of viscus. Any of the organs within the body.

APPENDIX D.

PUBLIC STATUTES.

CHAPTER 83.

OF THE STATE BOARD OF HEALTH.

Section 1. The governor with the advice and consent of the senate shall appoint six persons, two from the county of Providence and one from each of the other counties, who shall constitute the state board of health, one of whom shall be appointed in each year for the term of six years from the first day of July. Any appointment to fill a vacancy shall be for the remainder of the term. Of the persons so appointed, at least three shall be well educated physicians and members of some medical society incorporated by the state. The governor may remove any member for cause, at any time, upon the written request of two-thirds of the board.

Sec. 2. The board shall take cognizance of the interests of life and health among the citizens of the state; they shall make investigation into the causes of disease, and especially of epidemics and endemics among the people, the sources of morality, and the effects of localities, employments, conditions and circumstances on the public health, and shall do all in their power to ascertain the causes and the best means for the prevention of diseases of every kind in the state. They shall publish and circulate, from time to time, such information as they may deem to be important and useful for diffusion among the people of the state, and shall investigate and give advice in relation to such subjects relating to the public health, as may be referred to them by the general assembly or by the governor when the general assembly is not in session.

Sec. 3. The state board of health shall also investigate the subject of diseases among cattle or other animals.

Sec. 4. The board shall meet in the city of Providence once in three months, and as much oftener as they may deem necessary. No member of the board, except the secretary, shall receive any compensation for his services; but the actual personal expenses of any member, while engaged in the duties of the board, shall be paid by the state.

SEC. 5. The board shall elect a well qualified physician as their secretary, who shall be *ex-officio* a member of the board, the commissioner of public health and state registrar, but he shall not be permitted to vote on any question in which he is personally interested or be entitled to any additional compensation for mileage or expenses.

SEC. 6. The secretary of the board shall make inquiry from time to time, of the clerks of town and local boards of health and practising physicians in relation to the prevalence of any disease, or knowledge of any known or generally believed source of disease or causes of general ill-health, and also in relation to the proceedings of the said boards of health, in respect of acts for the promotion and protection of the public health, and also in relation to diseases among domestic animals in their several towns; and the said clerks of town and local boards of health and said practising physicians shall give information, in reply to said inquiries, of such facts and circumstances as shall have come to their knowledge.

"SEC. 7. The secretary shall perform and superintend the work prescribed for said board by law and such other duties as the board may require; he shall prepare and publish in every calender month a general summary of all the deaths and causes of the same which had occurred in the state during the preceding month, the same to be made up from returns of deaths which shall be sent to him on or before the tenth day of the month following the date of such deaths, by the several town and city clerks and the city registrar of Providence city; he shall also prepare and publish for general distribution a monthly circular giving information and advice in regard to the preservation of health, suitable for each particular season, and giving also such information as he shall deem of advantage to the public, as to the prevalence and character of infectious diseases of domestic animals, and for such service he shall receive the sum of seventeen hundred dollars annually, or such proportion thereof as the said board may determine. He shall hold his office during the pleasure of the board and may be removed at any regular meeting by a majority vote of the members of said board."

SEC. 8. The governor shall provide a suitable office for the board in the city of Providence, and the actual expenses of the board and of the members thereof, when certified by the chairman and approved by the governor, shall be paid from the state treasury.

SEC. 9. The board shall make a report in print to the general assembly, annually, of its proceedings during the year ending on the thirty-first day of December next preceding, with such suggestions in relation to the sanitary laws and interests of the state as they shall deem important.

ADDITIONS TO THE LIBRARY.

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Conn. Annual Report (10th) of the State Board of Health.
N. Y. Annual Report (8th) of the State Board of Health.
N. J. Annual Report (11th) of the State Board of Health.
N. H. Annual Report (7th) of the State Board of Health.
S. C. Annual Report (8th) of the State Board of Health.
Ind. Annual Report (6th) of the State Board of Health.
Ill. Annual Report (9th) of the State Board of Health.
Wis. Annual Report (11th) of the State Board of Health.
Iowa. Biennial Report (4th) of the State Board of Health.
Min. Annual Report (12th) of the State Board of Health.
Michigan. Annual Report (15th) of the State Board of Health.
Cal. Biennial Report (10th) of the State Board of Health.
Can. Annual Report (6th) of the Provincial Board of Health.
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Kans. Annual Report (3d) of the State Board of Health.
Md. Biennial Report (7th) of the State Board of Health.
La. Biennial Report of the State Board of Health.
Del. Annual Report (3d) of the State Board of Health.
Penn. Annual Report (3d) of the State Board of Health.
N. C. Biennial Report (2d) of the State Board of Health.
Maine. Annual Report (3d) of the State Board of Health.
U. S. Proceedings of National Conference of State Boards of Health, 1887.
Germany. Statistical Report, Imperial, 1887.
Penn. Trans. State Sanitary Convention.
Ohio. State Sanitary Association Report, 1888.
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Oregon. Proceedings State Medical Society, 1887.

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Germany. Vital Statistics, Imperial, Berlin, 1887.

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" " N. H., 1887.
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" " Mich., 1886.
" " Ont., Can., 1886.
" " (50th) Registrar General, Eng.
" " (24th) Registrar General, Ireland.
" " Kingdom of Italy, 1887.
" " Dominion of Canada,—Mortality of Cities.
" " Province of Buenos Ayres, 1887.
" " Austro-Hungary, 1887.

Neb., University of, 1st Patho-Biological Report—The Swine Plague—Prof. F. S. Billings.

U. S. Index Catalogue, Library Surgeon General's Office, U. S. A., Vol. viii, L. to M.

Manitoba. Statutes of Province of.

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Crop Reports.

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School Hygiene, State Board of Health, N. Y.
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Malaria and Causation of, H. B. Baker, M. D.
Pneumonia and Causation of, H. B. Baker, M. D.
Recent Advances in State Med., H. B. Baker, M. D.
Tornado Circular, No. 1, U. S. Signal Service.
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N. J. Report of Dairy Commissioner W. K. Newton.
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REPORTS OF SUPERINTENDENTS, AND BOARDS OF HEALTH; VITAL STATISTICS OF CITIES, ETC.

Providence, R. I.; Boston, Mass.; Berlin, Germany, Buda-Pesth, Hungary; Rome, Italy; Dublin, Ireland; Utica, N. Y.; Atlanta, Ga.; Brooklyn, N. Y.; Coventry, Eng.; New Haven, Conn.; Boston, Mass.; Richmond, Va.; Memphis, Tenn.; Hudson County, N. J.; St. Paul, Minn.; Cincinnati, Ohio; Charleston, S. C.; Nashville, Tenn.; Baltimore, Md.; St. Louis, Mo.; Wilmington, Del.; Washington, D. C.; New Orleans, La.; Lansing, Mich.; Manchester, N. H.; Newark, N. J.; Salem, Mass.; Prov. Ontario, Can.; Reading, Pa.; Paterson, N. J.; Augusta, Ga.; Cleveland, O.; Detroit, Mich.; Minneapolis, Minn.; Newark, N. J.; Toronto, Can.; Newport, R. I.

REPORTS OF INSTITUTIONS, CONVENTIONS, SOCIETIES, BUREAUX, ETC.

Butler Hospital, Athenæum, Public Library, Historical Society, R. I. Medical Society, Brown University, City Manual, Bureau of Education, D. C., National Plumbers Association.

CIRCULARS, MONTHLY BULLETINS, QUARTERLY REPORTS, ETC.

From the State Boards of Health of Maine, New Hampshire, Vermont, Massachusetts, Connecticut, New York, New Jersey, Pennsylvania, Maryland, District Columbia, North Carolina, South Carolina, Tennessee, Kentucky, Michigan, Ohio, Wisconsin, Iowa, Illinois, Indiana, Missouri, Kansas, Minnesota, California, and the Ohio State Sanitary Association, National Association of Master Plumbers, U. S. Marine Hospital Service, U. S. Treasury Department, U. S. Agricultural Department.

PERIODICAL EXCHANGES.

The Sanitary News	Chicago, Ill.
The Sanitarian	New York, N. Y.
The North Carolina Medical Journal	Wilmington, N. C.
The Popular Science News	Boston, Mass.
The Medical Bulletin	Philadelphia, Pa.
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The New York Medical Abstract	New York, N. Y.
The Medical Chronicle	Baltimore, Md.
The American Veterinary Review	New York, N. Y.
The Manufacturer and Builder	“ “
The Analyst	“ “
The New England Medical Gazette	Boston, Mass.
The Medical World	Philadelphia, Pa.
Building, the Journal of Architecture	New York, N. Y.
The Journal of the American Medical Association	Chicago, Ill.
The Sanitary Era	New York, N. Y.
The Medical Herald	Louisville, Ky.
The American Medical Digest	New York, N. Y.
The Anti-Adulteration Journal	Philadelphia, Pa.
The School Journal	Chicago, Ill.
The Open Court	“ “
The Sanitary Record	London, Eng.
The Veterinary Journal	“ “
The Journal of Comparative Medicine and Surgery	Philadelphia, Pa.
The Industrialist	Manhattan, Kan.
The Boston Journal of Health	Boston, Mass.

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THIRTY-FIFTH REPORT

UPON THE

Births, Marriages and Deaths,

IN THE

STATE OF RHODE ISLAND

FOR THE

YEAR ENDING DECEMBER 31, 1887,

PREPARED BY

CHARLES H. FISHER, M. D.

STATE REGISTRAR OF VITAL STATISTICS; SECRETARY OF THE STATE BOARD OF HEALTH.

PROVIDENCE:
E. L. FREEMAN & SON, PRINTERS TO THE STATE.
1888.

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OF THE

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CHARLES H. FISHER, M. D., *ex-officio and Secretary*	PROVIDENCE	PROVIDENCE CO.

State of Rhode Island and Providence Plantations.

OFFICE OF THE STATE REGISTRAR OF VITAL STATISTICS,

PROVIDENCE, December, 1888.

To the Honorable General Assembly:

The Thirty-Fifth Annual Report upon the Registration of Births, Marriages and Deaths in Rhode Island, during the year 1887, is herewith respectfully submitted.

The plan of previous years, in regard to the general arrangement of Tables, summaries and comments, has been followed in this report, a few special changes only having been made to meet certain requirements.

In the special Tables the object has been to present the important facts of many years of registration, as well as of single years, in such manner as to make them readily apparent, and relieve the reader of the statistics of much of the labor of personal examination of the general Tables, for the purpose of ascertaining the relation the various facts bear to each other.

In the computation of the ratios of births, marriages and deaths, in proportion to the population, it will be obvious that absolutely exact results cannot be obtained for non-census years, inasmuch as the exact population cannot be known in other than those years in which a census of the population is taken.

The plan, therefore, adopted of late years in the preparation of the reports, has been to obtain from the officials of the different towns and cities the estimated population of their respective towns and cities in the middle of the year, according to their best knowledge and belief. The data thus obtained has served as a basis for the rate-computations for the different civil divisions.

The estimate of the population of the State, at the middle of the year, and upon which the birth, marriage and death rates for the State are computed, is obtained by assuming that the rate of increase of population, since the taking of the census in the middle of the year 1885, has been the same as during the years between the two last census enumerations.

No other method has seemed to present results so approximate and trustworthy.

The general results of vital registration, during 1887, are as follows:

BIRTHS.

SEX.		PARENTAGE.	
Males	3,968	American	3,607
Females	3,700	Foreign	4,061

Whole number of births 7,668

MARRIAGES.

Native born Groom and Bride	1,465
Foreign born Groom and Bride	808
Native Groom and Foreign Bride	303
Foreign Groom and Native Bride	263
Whole number of marriages	2,839

DEATHS.

SEX.		PARENTAGE.	
Males	3,177	American	2,926
Females	3,163	Foreign	3,414

Whole number of deaths 6,340

There was one birth to every 41.3 of the population, or 24.2 births in every 1,000.

One person married in every 55.8 of the population, or 18 persons married in every 1,000.

And one death in every 50.2 of the population, or 19.9 deaths in every 1,000.

The following summary will show the rates, per 1,000 of the population, of births, marriages and deaths, for eight years:

	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.
Birth rates	22.8	24.4	24.7	24.4	23.9	23.1	24.5	24.2
Death rates	17.5	18.1	18.3	18.1	17.1	17.7	18.8	19.9
Excess of Birth rates over Death rates	5.3	6.3	6.4	6.3	6.8	5.4	5.7	4.2
Marriage rates	20.0	19.8	19.1	18.5	17.2	16.3	17.7	18.0

With great respect,

CHAS. H. FISHER,

State Registrar.

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REPORT UPON THE REGISTRATION

OF

BIRTHS, MARRIAGES AND DEATHS

IN

RHODE ISLAND,

FOR THE

YEAR ENDING DECEMBER 31, 1887,

AND

FOR VARIOUS PERIODS FROM 1853 TO 1887 INCLUSIVE.

TABLE I.

GENERAL SUMMARY OF BIRTHS, MARRIAGES AND DEATHS,

IN THE STATE OF RHODE ISLAND DURING THE YEAR

1887.

TOWNS AND DIVISIONS OF THE STATE.	BIRTHS, 1887.							MARRIAGES, 1887.					DEATHS, 1887.												
		SEX.		PARENTAGE.					NATIVITY.					SEX.		PARENTAGE.		Ages Given.		Aggregate Age in years.		Average Age in years.			
	Whole Number.	Males.	Females.	American.	Foreign.	Am. Father. For. Mother.	For. Father. Am. Mother.	Whole Number.	American.	Foreign.	Am Groom. For. Bride.	For. Groom. Am. Bride.	Whole Number.	Males.	Females.	American.	Foreign.	Males.	Females.	Males.	Females.	Males.	Females.	Aggregate Age in years of all.	Average Age in years of all.
Barrington....	18	8	10	10	8	...	....	6	6	......	..	...	20	11	9	15	5	11	9	460	479	41.82	53.22	939	46.95
Bristol........	116	62	54	51	47	5	13	36	22	8	3	3	119	60	59	69	50	59	59	1,660	1,997	27.66	33.85	3,657	30 73
Warren	94	52	42	35	42	10	7	33	14	13	3	3	78	42	36	36	42	41	36	1,164	1,378	27.71	38 28	2,542	32 59
BRISTOL COUNTY	228	122	106	96	97	15	20	75	42	21	6	6	217	113	104	120	97	111	104	3,284	3,854	29.55	37.36	7,138	33.20
Coventry	95	42	53	41	41	9	4	22	19	......	2	1	67	37	30	58	9	37	30	1,264	1,026	34.05	34.20	2,290	34.19
East Greenwich	71	39	32	44	15	7	5	31	20	4	6	1	41	25	19	32	12	25	19	683	901	27 32	47.42	1,584	36.00
West Greenwich.....	22	14	8	17	1	2	2	5	5	......	....	....	9	4	5	9	......	4	5	147	274	36.75	54.80	421	45 77
Warwick	322	185	137	121	148	25	28	127	51	47	14	15	223	111	112	117	106	111	111	3,620	3,134	32 61	27.98	6,754	30 29
KENT COUNTY	510	280	230	223	205	43	39	185	95	51	22	17	343	177	166	216	127	177	165	5,714	5,335	48.84	32.33	11,049	39.15
Jamestown	6	5	1	6	......	....	...	4	3	......	1	....	11	7	4	9	2	7	4	329	244	47.00	61.00	573	52 09
Little Compton	7	4	3	6	1	....	....	9	9	......	....	...	14	4	10	12	2	4	10	202	612	50 50	61.20	814	43.85
Middletown	33	16	17	21	8	3	1	6	6	......	....	....	15	10	5	10	5	10	5	494	345	49 40	49.40	839	55 93
New Shoreham.......	24	11	13	22	......	1	1	13	12	......	1	....	22	10	12	22	.....	10	12	423	541	42.30	45.08	964	43 36
Portsmouth..........	26	16	10	20	3	3	....	9	6	2	...	1	17	11	6	15	2	11	6	585	372	53.18	62 00	957	56 29
Tiverton.............	79	42	37	30	41	7	1	11	6	2	3	...	49	27	22	41	8	26	22	1,017	847	37 66	38.50	1,864	36.00
TOWNS, NEWPORT CO.	175	94	81	105	53	14	3	52	42	4	5	1	128	69	59	109	19	68	59	3,050	2,961	45 15	50.19	6,011	47 33
NEWPORT CITY... ..	632	321	311	266	253	52	61	123	73	30	8	12	313	155	158	190	123	155	158	5,113	5,258	33.00	33.28	10,371	33.13

TOWNS AND DIVISIONS OF THE STATE.	BIRTHS, 1887.							MARRIAGES, 1887.					DEATHS, 1887.												
		SEX.		PARENTAGE.					NATIVITY.					SEX.		PARENTAGE.		Ages Given.		Aggregate Age in years.		Average Age in years.			
	Whole Number.	Males.	Females.	American.	Foreign.	Am. Father. For. Mother.	For. Father. Am. Mother.	Whole Number.	American.	Foreign.	Am. Groom. For. Bride.	For. Groom. Am. Bride.	Whole Number.	Males.	Females.	American.	Foreign.	Males.	Females.	Males.	Females.	Males.	Females.	Aggregate Age in years of all.	Average Age in years of all.
Burrillville	99	45	54	23	52	12	12	36	21	11	3	1	75	40	35	42	33	40	35	1,521	1,443	38.02	41.22	2,964	39.52
Cranston	157	75	82	83	46	17	11	34	22	9	3	....	102	57	45	60	42	57	45	2,170	1,026	58 67	22.80	3,196	31.33
Cumberland	164	88	76	48	85	18	13	72	20	35	9	8	140	72	68	50	90	71	68	1.976	2,279	27.75	33.57	4,255	30.39
East Providence	131	73	58	74	39	9	9	55	73	7	3	2	96	45	51	56	40	45	51	1,599	1,159	35.53	24 68	2,758	28.73
Foster	20	10	10	20	......	....	....	12	12	......	...	....	33	16	17	31	2	16	17	1,022	1,199	63 87	70 55	2,221	67 30
Glocester	43	22	21	17	15	3	8	7	5	......	2	....	39	16	23	29	10	16	23	763	1,003	47 68	43.60	1,766	45.28
Johnston	140	77	63	63	51	12	14	26	14	9	2	1	172	97	75	95	77	97	75	2,890	2,392	29 79	31 89	5,282	30.70
Lincoln	595	298	297	82	405	46	62	114	36	56	9	13	413	200	213	92	321	198	211	3,460	5,736	17.30	26 92	9,196	22 26
North Providence	30	14	16	8	17	2	3	7	3	3	1	...	22	15	7	13	9	15	7	606	599	40.40	77.00	1,205	54.77
North Smithfield	70	42	28	23	37	2	8	23	5	12	4	2	36	20	16	14	22	20	16	609	574	30 45	35 87	1,183	32.86
Pawtucket	620	310	310	226	240	68	86	316	127	110	44	35	553	272	281	216	337	269	281	7,667	10,210	28.50	36.33	17,877	32 49
Scituate	51	24	30	36	10	4	4	50	39	5	5	1	59	26	33	51	8	26	32	1,195	2,062	45 96	62.48	3,257	55 20
Smithfield	35	20	15	21	11	2	1	16	14	1	....	1	27	18	9	17	10	18	9	540	580	30.00	64.44	1,120	41.48
Woonsocket	541	277	264	96	354	38	53	163	57	62	15	29	444	208	236	92	352	207	235	3,652	5,194	17.56	22.00	8,846	19 90
PROVIDENCE COUNTY	2,699	1,375	1,324	820	1,362	233	284	931	418	320	100	93	2,211	1,102	1,109	858	1,353	1,095	1,105	29,670	35,456	27.10	32.12	65,126	29.60
PROVIDENCE CITY	2,963	1,538	1,425	1,114	1,259	274	316	1,284	643	361	157	123	2,640	1,314	1,326	1,094	1,546	1,314	1,326	38,858	40,442	29.57	30.41	79,300	30 00
Charlestown	16	11	5	16	......	....	....	2	2	......	....	....	21	10	11	21	......	10	11	566	490	56 60	44.45	1,056	50.28
Exeter	13	9	4	13	......	....	....	8	7	......	....	1	18	14	4	18	......	14	4	837	848	59.78	21 20	1,685	99.16
Hopkinton	56	31	25	45	4	6	1	44	42	......	....	2	32	14	18	32	......	14	18	498	848	35 57	47 11	1,346	42.06
North Kingstown	82	45	37	63	8	7	4	23	20	2	...	1	80	42	38	68	12	40	38	1,721	1,379	40 97	36.28	3,100	38.75
South Kingstown	111	51	60	93	2	13	3	45	42	2	....	1	62	27	35	56	6	27	35	1,184	1,180	43.85	33.71	2,364	38 12
Richmond	36	16	20	23	6	4	3	3	3	......	....	....	33	16	17	33	.. ..	16	17	577	583	36.06	24.29	1,160	35 15
Westerly	147	75	72	58	66	11	12	64	36	17	5	6	105	48	57	59	46	48	57	1,488	2,006	31.00	35.19	3,494	34 91
WASHINGTON CO.	461	238	223	311	86	41	23	189	152	21	5	11	351	171	180	287	64	169	180	6,871	7,334	40.66	40.74	14,205	40 70
COUNTIES.																									
Bristol	228	122	106	96	97	15	20	75	42	21	6	6	217	113	104	120	97	111	104	3,284	3,854	29.55	37.36	7,138	33.20
Kent	510	280	230	223	205	45	39	185	95	51	22	17	343	177	166	216	127	177	165	5.714	5,335	48 84	32 33	11,049	39 15
Newport	807	415	392	371	306	66	64	175	115	34	13	13	441	224	217	299	142	223	217	8,163	8.219	36.61	37 83	16,382	37.23
Providence	5,662	2,913	2,749	1,934	2,621	507	600	2,215	1,061	681	257	216	4,851	2,416	2,435	1,952	2,899	2,409	2,431	68,528	75,898	28 44	31.23	144,426	29 82
Washington	461	238	223	311	86	41	23	189	152	21	5	11	351	171	180	287	64	169	180	6,871	7,334	40.66	40.74	14.205	40.70
State Institutions	.. ..	......	.. ..	......	......	....	.. .	......	......	......	. ..	....	137	76	61	52	85	76	61	3,604	3,290	47,42	53 93	6,894	50.32
WHOLE STATE	7,668	3,968	3,700	2,935	3,315	672	746	2,839	1,465	808	303	263	6,340	3,177	3,163	2,926	3,414	3,165	3,158	96,164	103,930	30 97	32.91	200,094	31.95

TABLE II.—BIRTHS, 1887.

Arranged by Months, Sexes, and Divisions of the State.

MONTHS.	SEX.	Whole State.	DIVISIONS OF THE STATE.						
			Bristol County.	Kent County.	Newport County Towns.	Newport City.	Providence County Towns.	Providence City.	Washington County.
January....	Males . . .	306	7	27	3	22	99	134	14
	Females. .	320	10	26	9	36	112	106	21
	Total....	626	17	53	12	58	211	240	35
February...	Males . . .	287	15	15	8	24	106	100	19
	Females. .	285	11	17	8	22	109	101	17
	Total....	572	26	32	16	46	215	201	36
March	Males . . .	322	13	26	7	24	102	124	26
	Females. .	308	6	17	7	28	110	122	18
	Total....	630	19	43	14	52	212	246	44
April	Males . . .	330	9	27	4	21	122	128	19
	Females. .	299	5	12	9	27	108	117	21
	Total....	629	14	39	13	48	230	245	40
May.......	Males . . .	319	8	20	9	24	105	133	20
	Females. .	285	11	14	4	18	107	123	8
	Total....	604	19	34	13	42	212	256	28
June	Males . . .	326	10	20	6	34	99	136	21
	Females. .	300	7	18	7	20	94	131	23
	Total....	626	17	38	13	54	193	267	44
July.......	Males . . .	310	8	17	8	26	114	124	13
	Females. .	312	9	17	3	15	115	126	27
	Total....	622	17	34	11	41	229	250	40

Table II.—BIRTHS. 1887.—Continued.

MONTHS.	SEX.	Whole State.	DIVISIONS OF THE STATE.						
			Bristol County.	Kent County.	Newport County Towns.	Newport City.	Providence County Towns.	Providence City.	Washington County.
August	Males . .	359	4	21	8	20	129	158	19
	Females. .	309	8	20	2	21	125	116	17
	Total	668	12	41	10	41	254	274	36
September. .	Males . . .	350	17	29	9	33	113	131	18
	Females. .	316	11	25	5	30	107	122	16
	Total	666	28	54	14	63	220	253	34
October	Males . . .	357	13	26	9	31	126	124	28
	Females. .	312	9	24	9	32	99	118	21
	Total	669	22	50	18	63	225	242	49
November . .	Males . . .	331	7	19	11	34	125	120	15
	Females. .	307	11	20	8	29	103	114	22
	Total	638	18	39	19	63	228	234	37
December . .	Males . . .	371	11	33	12	28	135	126	26
	Females. .	347	8	20	10	33	135	129	12
	Total	718	19	53	22	61	270	255	38
Whole Year.	Males . . .	3,968	122	280	94	321	1,375	1,538	238
	Females. .	3,700	106	230	81	311	1,324	1,425	223
	Total	7,668	228	510	175	632	2,699	2,963	461

TABLE III.—PLURALITY BIRTHS, 1887.

ARRANGED BY MONTHS AND DIVISIONS OF THE STATE, AND SHOWING THE NATIVITY OF THE PARENTS.

MONTHS.	Number of Cases.	SEX.	Number of Children.	DIVISIONS OF THE STATE							NATIVITY OF THE PARENTS.																						
				Bristol County.	Kent County.	Newport Co. To.	Newport City.	Provid'ce Co. To.	Providence City.	Washington Co.	American.	English.	French.	German.	Irish.	Portuguese.	American Father. English Mother.	American Father. French Mother.	American Father. Irish Mother.	American Father. Nova Scotia Mo.	English Father. Amer. Mother.	English Father. Irish Mother.	English Father. Scotch Mother.	French Father. Amer. Mother.	French Father. Irish Mother.	Irish Father. Amer. Mother.	Irish Father. English Mother.	Irish Father. German Mother.	Irish Father. Welsh Mother.	Italian Father. Irish Mother.	Nova Scotia Fa. Amer. Mother.	Scotch Father. Amer. Mother.	Swedish Father. Amer. Mother.
January...	14	Males.. 10 Females. 18	28	..	..	..	3	4	4	3	6	1	2	..	2	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
February..	6	Males.... 7 Females. 5	12	..	..	3	1	..	2	..	3	..	..	..	..	1	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..
March....	8	Males.... 9 Females. 8	*17	..	2	..	..	..	4	2	..	1	1	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	1
April.....	7	Males.... 3 Females. 11	14	..	1	..	2	2	1	1	2	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1
May......	4	Males... 3 Females. 5	8	..	2	..	..	1	..	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
June.....	4	Males.... 6 Females. 2	8	..	..	..	1	1	2	..	2	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
July......	7	Males.... 9 Females. 5	14	..	..	..	2	2	3	..	1	..	..	1	2	..	..	..	1	1	..	..	..	..	1	..	..	..	..	..	..	..	..
August...	5	Males. .. 6 Females. 4	10	1	..	..	..	3	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..
September.	8	Males.... 11 Females. 5	16	..	1	..	1	2	4	..	3	..	..	1	1	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..
October..	7	Males.... 8 Females. 6	14	1	..	..	2	3	1	..	2	1	..	..	1	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
November.	5	Males.... 6 Females. 4	10	..	..	..	3	..	1	1	1	1	..	..	1	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..
December.	9	Males.... 10 Females. 8	18	..	..	2	..	2	5	..	4	..	1	..	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..
Whole Year	84	Males.... 88 Females. 81	169	2	6	5	15	20	28	8	28	5	4	4	10	2	2	1	1	2	1	2	1	2	1	2	2	1	1	1	1	4	2

* One case of triplets in Washington county, in March.

Italian, Scotch, Swedish and Western Islands, one case each.

Table IV.—MARRIAGES, 1887.

Arranged by Months and Divisions of the State.

MONTHS.	Whole State, 1887.	DIVISIONS OF THE STATE.							Whole State, 1886.
		Bristol County.	Kent County.	Newport County Towns.	Newport City.	Providence County Towns.	Providence City.	Washington County.	
January........	288	9	20	8	3	103	132	13	202
February.......	227	4	15	8	6	69	108	17	202
March..........	122	1	4	3	6	33	64	11	190
First Quarter....	637	14	39	19	15	205	304	41	594
April	214	7	13	1	9	61	115	8	185
May............	233	11	15	5	5	75	104	18	230
June...........	269	6	18	1	10	95	125	14	253
Second Quarter..	716	24	46	7	24	231	344	40	668
July...........	201	4	18	1	8	79	80	11	202
August.........	191	6	7	5	13	72	75	13	213
September......	277	8	20	3	16	89	125	16	281
Third Quarter...	669	18	45	9	37	240	280	40	696
October	302	10	16	8	17	90	145	16	276
November	331	5	21	6	21	106	142	30	317
December	184	4	18	3	9	59	69	22	199
Fourth Quarter..	817	19	55	17	47	255	356	68	792
Whole Year.....	2,839	75	185	52	123	931	1,284	189	2,750

TABLE V.—DEATHS, 1887.

Arranged by Months, Sexes and Divisions of the State.

MONTHS.	SEX.	Whole State.	DIVISIONS OF THE STATE.								State Institutions.
			Bristol County.	Kent County.	Newport County Towns.	Newport City.	Providence County Towns.	Pawtucket City.	Providence City.	Washington County.	
January....	Males . . .	235	6	15	3	9	55	14	112	13	8
	Females. .	255	10	20	8	12	61	21	106	11	6
	Total....	490	16	35	11	21	116	35	218	24	14
February...	Males . . .	216	12	16	10	11	41	14	95	12	5
	Females. .	225	8	17	6	11	48	12	106	15	2
	Total....	441	20	33	16	22	89	26	201	27	7
March	Males . . .	254	9	13	7	11	68	17	110	14	5
	Females. .	263	6	9	10	15	71	23	108	18	3
	Total....	517	15	22	17	26	139	40	518	31	8
April	Males . . .	249	9	14	2	16	50	29	110	13	6
	Females. .	268	10	16	5	12	64	34	107	15	5
	Total....	517	19	30	7	28	114	63	217	28	11
May	Males . . .	230	5	17	6	15	51	15	103	11	7
	Females. .	227	8	9	7	11	56	11	110	12	3
	Total....	457	12	26	13	26	107	26	213	23	10
June..... ..	Males . . .	232	7	10	5	15	64	18	85	16	12
	Females. .	206	5	10	2	12	56	21	85	8	7
	Total....	438	12	20	7	27	120	39	170	24	19
July	Males . . .	326	9	10	6	12	110	34	121	15	9
	Females. .	325	12	27	3	16	95	29	111	20	12
	Total....	651	21	37	9	28	205	63	232	35	21

Table V.—DEATHS. 1887.—Continued.

MONTHS.	SEX.	Whole State.	DIVISIONS OF THE STATE.								State Institutions.
			Bristol County.	Kent County.	Newport County Towns.	Newport City.	Providence County Towns.	Pawtucket City.	Providence City.	Washington County.	
August	Males . . .	345	20	25	7	15	91	32	129	20	6
	Females. .	302	12	16	2	13	80	26	129	19	5
	Total	647	32	41	9	28	171	58	258	39	11
September . .	Males . . .	298	9	17	5	14	76	31	125	15	6
	Females. .	291	14	16	5	18	79	32	103	15	9
	Total	589	23	33	10	32	155	63	228	30	15
October	Males . . .	259	9	14	5	14	72	25	107	9	4
	Females. .	261	6	8	3	10	54	21	139	18	2
	Total	520	15	22	8	24	126	46	246	27	6
November . .	Males . . .	264	8	12	6	12	83	22	102	15	4
	Females. .	255	8	8	4	14	80	27	97	14	3
	Total	519	16	20	20	26	163	49	179	29	7
December . .	Males . . .	269	10	14	7	11	69	21	115	18	4
	Females. .	285	5	10	4	14	84	24	125	15	4
	Total	554	15	24	11	25	153	45	240	33	8
Whole Year.	Males . . .	3,177	113	177	69	155	830	272	1,314	171	76
	Females. .	3,163	104	166	59	158	828	281	1,326	180	61
	Total	6,340	217	343	128	313	1,658	553	2,640	351	137

TABLE VI.—DEATHS, 1887.

Exhibiting the Whole Number, the Proportion to Population, the Number of each Sex, and the Number in each Period of Life, in every Town and Division of the State.

TOWNS AND DIVISIONS OF THE STATE.	Population, 1887.*	DEATHS.				Under 1 year.	1 to 2.
		Whole Number.	Per 1,000 of population.	SEX.	Number of each Sex.		
Barrington	1,394	20	14.4	Males.....	11	1	....
				Females...	9	1	....
Bristol	6,000	119	19.8	Males.....	60	19	4
				Females...	59	7	3
Warren..	4,300	78	18.1	Males.....	42	12	3
				Females...	36	8	2
BRISTOL COUNTY..	11,694	217	18.2	Males.....	113	32	7
				Females...	104	16	5
Coventry	5,000	67	13.4	Males.....	37	4	4
				Females...	30	6	2
East Greenwich...	2,800	44	15.7	Males.....	25	7	1
				Females...	19	....	....
West Greenwich ..	850	9	10.6	Males.....	4	1	....
				Females...	5	1	....
Warwick.........	13,508	223	16.5	Males.....	111	27	5
				Females...	112	27	5
KENT COUNTY ...	22,158	343	15.5	Males. ...	177	39	10
				Females...	166	34	7
Jamestown.......	520	11	21.2	Males.....	7	1	....
				Females...	4	....	....
Little Compton...	1,052	14	13.3	Males.....	4	....	....
				Females...	10	1	...
Middletown	1,175	15	12.8	Males.....	10	2	....
				Females...	5	1	....
New Shoreham ...	1,275	22	17.3	Males.....	10	2	....
				Females...	12	1	2
Portsmouth	2,000	17	8.5	Males.....	11	...	2
				Females...	6	2	....
Tiverton	2,725	49	18.0	Males.....	27	7	....
				Females...	22	5	1
TOWNS, NEWP'T CO	8,747	128	14.6	Males.....	69	12	2
				Females...	59	10	3
NEWPORT CITY ...	20,466	313	15.3	Males.....	155	38	15
				Females...	158	35	7

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* Estimated by the municipal authorities of each.

Table VI.—DEATHS, 1887.—Continued.

2 to 3.	3 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.	Age not stated.
1	1	...	....	....	....	....	3	1	1	1	1	1	....
....	....	...	1	1	....	....	1	....	2	2	1	....	....
1	1	2	....	....	3	3	12	3	5	5	2	....	1
3	3	7	....	1	3	8	3	7	5	2	7	....	....
2	4	....	....	....	2	2	1	8	1	5	....	2	....
1	....	1	1	2	1	2	1	3	4	5	3	2	....
4	6	2	....	....	5	5	15	12	7	11	3	3	1
4	3	8	2	4	4	10	5	10	11	9	11	2	....
1	2	3	....	2	4	2	1	5	2	4	2	1	....
1	....	4	1	1	1	....	....	2	6	1	4	1	....
2	....	1	....	....	3	2	3	2	1	3	....	....	....
1	....	1	....	1	3	2	....	3	4	3	....	1	....
....	....	1	....	....	...	....	....	1	....	....	1	...	....
....	....	....	....	....	....	1	....	....	1	....	1	1	....
4	7	5	....	3	12	3	2	11	13	11	8	....	....
3	9	3	4	5	6	9	7	8	10	10	6	....	...
7	9	10	....	5	19	8	6	19	16	18	11	1	....
5	9	8	5	7	10	12	7	13	21	14	11	3	....
...	....	....	....	....	1	1	1	....	1	2	....	....	....
....	....	....	1	....	....	....	....	....	1	1	....	1	....
....	....	....	1	....	....	....	....	1	1	1	....	....	....
....	....	...	....	...	....	....	....	2	3	3	1	....	....
....	....	....	....	...	....	1	2	1	1	1	2	....	....
....	....	....	1	....	....	....	....	....	1	1	....	1	....
1	....	....	1	....	1	1	2	....	....	1	1	....	....
....	....	....	....	....	2	1	1	....	1	2	1	1	....
....	....	....	....	....	....	...	2	1	4	....	1	1	....
....	....	...	....	....	....	....	....	....	3	1	....	....	....
....	....	1	....	....	3	....	2	2	4	3	3	1	1
....	....	2	1	....	1	1	2	1	2	4	2	....	...
1	....	1	2	....	5	3	9	5	11	8	7	2	1
....	....	2	3	....	3	2	3	3	11	12	4	3	....
3	5	....	5	9	8	9	11	18	9	17	7	1	....
3	5	3	4	3	17	14	5	9	18	17	11	7	....

Table VI.—DEATHS, 1887.—Continued.

TOWNS AND DIVISIONS OF THE STATE.	Population, 1887.*	Deaths.				Under 1 year.	1 to 2.
		Whole Number.	Per 1,000 of Population.	SEX.	Number of each Sex.		
Burrillville.......	5,400	75	13.9	Males.....	40	7	1
				Females...	35	4	1
†Cranston	4,800	102	21.2	Males.....	57	12	2
				Females...	45	6	1
Cumberland......	7,263	140	19.5	Males.....	72	17	3
				Females...	68	11	2
East Providence ..	7,000	96	13.7	Males.....	45	12	2
				Females...	51	11	8
Foster...........	1,390	33	23.7	Males.....	16	1	....
				Females...	17	....	....
Glocester.........	2,100	39	18.6	Males.....	16	3	....
				Females...	23	4	1
Johnston.........	7,500	172	23.1	Males. ...	97	20	3
				Females...	75	8	8
Lincoln..........	18,000	413	23.0	Males.....	200	72	18
				Females...	213	50	20
North Providence.	1,550	22	14.2	Males.....	15	5	....
				Females...	7	....	....
North Smithfield..	3,160	36	11.4	Males.....	20	7	....
				Females...	16	4	...
Scituate..........	3,600	59	16.4	Males.....	26	2	3
				Females...	33	3	....
Smithfield........	2,500	27	10.8	Males.....	18	6	2
				Females...	9	....	....
Woonsocket	19,000	444	23.4	Males.....	208	59	22
				Females...	236	57	19
†TOWNS, PROV. CO	83,263	1,658	19.3	Males.....	830	223	56
				Females...	828	158	60
PAWTUCKET CITY.	24,800	553	22.3	Males.....	273	68	21
				Females...	280	51	14
PROVIDENCE CITY.	122,000	2,640	21.6	Males.....	1,314	270	96
				Females...	1,326	208	101
Charlestown	1,050	21	20.0	Males.....	10	...	...
				Females...	11	....	....
Exeter...	1,050	18	17.1	Males.....	14	....	....
				Females...	4	....	....
Hopkinton	2,767	32	11.2	Males.....	14	2	1
				Females...	18	....	....
N. Kingstown....	3,870	80	20.7	Males.....	42	4	2
				Females...	38	2	2
Richmond	1,800	33	18.3	Males. ...	16	....	1
				Females...	17	2	1
S. Kingstown.....	5,600	62	11.1	Males.....	27	3	2
				Females...	35	12	1
Westerly........	6,500	105	16.2	Males.....	48	10	....
				Females...	57	6	3
WASHINGTON CO..	22,637	351	15.5	Males.....	171	19	6
				Females...	180	22	7
State Ins. Cranston	1,400	137	97.8	Males.....	76	4	....
				Females...	61	3	....

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* Estimated by municicipal authorities of each. † Not including State Institutions.

Table VI.—DEATHS, 1887.—Continued.

2 to 3.	3 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.	Age not stated.
1	3	....	....	2	2	1	5	5	3	6	7	....	....
....	2	1	....	3	2	3	3	4	5	5	2	....	....
2	1	6	....	1	...	5	1	6	6	13	2	....	....
1	....	1	1	1	2	3	5	1	7	10	4	2	....
1	4	7	2	1	7	4	5	7	4	4	5	....	1
2	8	7	1	....	6	3	7	3	6	7	4	1	....
1	....	3	....	2	2	2	4	4	5	4	4	....	....
2	...	3	2	2	6	3	3	2	2	5	2	....	....
....	....	....	....	....	1	1	1	1	5	4	2	....	....
....	....	....	....	...	1	....	....	2	6	4	3	1	....
....	....	....	....	2	1	....	....	2	3	2	2	1	....
1	....	...	1	1	....	1	....	5	4	2	3	....	....
3	4	7	6	3	6	2	11	8	7	10	6	1	....
....	5	8	1	3	10	7	4	....	8	6	4	3	....
9	10	14	6	5	15	9	7	10	13	6	4	....	2
7	12	10	5	4	21	11	14	18	19	13	5	2	2
....	....	....	....	1	1	....	1	1	2	....	4	....	....
....	....	....	....	....	....	....	1	....	1	1	2	2	....
....	2	....	....	....	1	1	1	2	2	1	3	....	....
2	....	...	1	....	1	1	1	....	2	3	....	1	....
....	....	2	....	....	1	1	1	2	3	6	5	....	....
....	....	....	....	1	1	....	2	2	9	9	5	....	1
....	1	....	....	1	....	1	....	2	3	1	1	....	....
....	....	....	....	1	....	....	1	2	1	2	2	....	....
17	11	20	7	4	7	13	11	8	14	7	6	1	1
16	21	14	4	11	21	11	12	11	14	15	6	3	1
34	36	59	21	22	44	40	48	58	70	64	48	3	4
31	48	44	16	27	71	53	53	50	84	82	42	15	4
9	10	9	5	8	18	24	22	15	34	16	8	3	3
8	9	13	3	11	21	17	20	27	30	36	13	7	....
49	64	82	27	39	100	110	90	111	128	97	42	9	....
59	76	65	26	44	116	107	80	122	114	109	80	19	....
....	1	1	....	....	....	....	1	2	1	3	1	....	....
....	1	1	1	....	1	1	2	....	....	3	....	1	....
....	....	....	....	1	....	....	1	4	4	3	....	1	....
....	....	....	....	1	....	....	....	....	....	2	....	1	....
....	1	2	....	....	1	2	....	....	2	1	2	....	....
1	1	....	1	....	2	3	2	2	1	1	4	....	....
2	2	1	....	1	2	4	3	4	5	6	3	1	2
....	2	6	....	2	....	1	5	2	6	8	....	2	....
1	....	2	1	1	1	3	2	....	2	....	2	....	....
....	1	2	1	1	....	2	....	1	2	2	2	....	....
1	....	....	....	....	3	2	5	1	2	5	2	1	....
....	2	1	....	....	4	1	...	4	2	1	6	1	....
1	2	6	1	2	6	6	1	1	6	5	1	....	....
3	3	3	3	4	7	3	1	1	5	10	4	1	....
5	6	12	2	5	13	17	13	12	22	23	11	3	2
4	10	13	6	8	14	10	11	10	16	27	16	6	....
....	1	....	2	2	5	7	15	9	14	10	6	....	1
....	....	....	....	1	9	4	10	4	13	12	4	1	....

TABLE VI Continued.—DEATHS, 1887.—RECAPITULATION.

DIVISIONS OF THE STATE.	Population, 1887.*	DEATHS.				Under 1 year.	1 to 2.
		Whole Number.	Per 1,000 of Population.	SEX.	Number of each Sex.		
BRISTOL COUNTY..	*11,694	217	18.7	Males.....	113	32	7
				Females...	104	16	5
KENT COUNTY....	*22,158	343	15.5	Males.....	177	39	10
				Females...	166	34	7
NEWPORT COUNTY.	*29,213	441	15.3	Males.....	224	50	17
				Females...	217	45	10
PROVIDENCE CO..	*230,063	4,851	21.0	Males. ...	2,417	561	173
				Females...	2,434	417	175
WASHINGTON CO..	*22,637	351	15.5	Males.....	171	18	6
				Females...	180	22	7
STATE INST'S.....	1,400	137	97.8	Males.....	76	4	....
				Females...	61	3	....
WHOLE STATE....	†317,074	6,340	19.9	Males.....	3,178	705	213
				Females...	3,162	537	204

* Estimated by municipal authorities.
†Estimated by State Registrar.

TABLE VI Continued.—DEATHS, 1887, RECAPITULATION.

2 to 3.	3 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.	Age not stated.
4	6	2	....	....	5	5	15	12	7	11	3	3	1
4	3	8	2	4	4	10	5	10	11	9	11	2	....
7	9	10	....	5	19	7	6	19	16	18	11	1	....
5	9	8	5	7	10	12	7	13	21	14	11	3	....
4	5	1	7	9	13	12	20	23	20	25	14	3	1
3	5	5	7	3	20	16	8	12	29	29	15	10	....
92	110	150	53	69	162	174	160	184	232	177	98	15	7
98	133	122	45	82	208	167	153	199	228	227	135	41	4
5	6	12	2	5	13	17	13	12	22	23	11	3	2
4	10	13	6	8	14	10	11	10	16	27	16	6	....
....	1	....	2	2	5	7	15	9	14	10	6	....	1
....	....	....	....	1	9	4	10	4	13	12	4	1	....
112	137	175	64	90	217	222	229	259	311	264	143	25	12
114	160	156	65	105	265	219	194	248	318	318	192	63	4

TABLE VII. CAUSES OF DEATH, 1887.

Arranged Alphabetically; showing the Number of each Sex, who died from each cause, in each month and in the whole year 1887; also the number of American and of Foreign Parentage, from each cause, for the year.

CAUSES OF DEATH.	Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		PARENTAGE.		SEX.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Am.	For.	M.	F.	Total.
Accidents, various	1	1	1	..	2	..	2	1	3	2	4	..	4	3	4	..	2	..	3	..	5	1	3	2	20	24	34	10	44
" Asphyxia	1	1	1	1	..	1	1	..	..	..	1	1	1	..	2	..	..	..	..	..	1	..	..	2	9	5	8	6	14
" Burns and Scalds	3	..	..	..	2	1	1	1	..	2	..	..	1	3	..	..	..	..	..	2	..	..	..	1	10	7	7	10	17
" Drowning	..	..	1	..	1	..	..	..	2	..	5	1	9	2	7	..	3	1	4	..	1	..	2	..	18	21	35	4	39
" Exposure	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1	2	...	2
" Exposure to Cold	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	1	..	..	..	1	1	..	1	3	3	3	3	6
" Falls	1	..	2	..	..	..	2	1	1	..	1	..	..	2	..	..	2	..	..	1	2	1	..	1	7	10	11	6	17
" Fractures	..	..	..	..	1	..	..	..	..	..	4	1	6	..	2	1	2	1	1	..	2	..	2	..	6	17	20	3	23
" Gun Shot Wounds	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	2	1	3	...	3
" Heat	..	..	..	..	..	..	..	..	..	..	..	..	4	..	2	..	..	..	..	..	..	..	..	..	....	6	6	...	6
" Lightning	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	....	1	1	...	1
" Neglect	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	....	1	1	...	1
" Poison	..	..	..	..	2	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	1	..	..	1	5	2	5	2	7
" Railroad	2	1	2	..	2	1	1	..	1	..	3	..	2	..	2	..	2	1	1	..	2	1	..	..	10	14	20	4	24
" Surgical Operation	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	1	...	1
Abortion	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	1	...	2	2
Abscesses	1	3	..	1	..	2	..	..	..	..	..	1	..	..	1	..	..	..	..	2	1	..	3	..	7	8	6	9	15
" Lumbar (psoas)	..	1	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1	2	1	2	3
" Pelvic	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	...	1	1
Adenitis	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	1	1	1	2
Alcoholism	1	..	..	..	..	..	..	..	1	..	..	..	3	..	1	..	2	..	2	..	2	1	1	1	4	11	13	2	15

CAUSES OF DEATH.	Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		PARENTAGE.		SEX.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Am	For.	M.	F.	Total.
Anæmia	..	1	..	..	..	2	..	1	..	2	1	..	..	3	..	1	..	..	..	..	..	..	..	2	6	7	1	12	13
Anasarca	..	..	..	..	..	..	..	..	..	1	..	1	1	..	1	..	..	..	..	..	..	..	..	..	2	2	2	2	4
Aneurism	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	....	1	...	1	1
" Aorta	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	..	..	2	1	1	2	3
" Thoracic	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	1	...	1
Angina Pectoris	..	..	..	..	..	2	1	..	..	..	..	..	..	..	2	1	2	..	1	..	1	..	..	1	9	2	7	4	11
Apoplexy	5	7	8	10	11	11	8	13	5	4	10	6	9	8	8	10	9	7	10	11	8	9	11	8	126	80	102	104	206
Arthrites	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	...	1	1
Asthenia	..	1	1	..	..	1	..	..	..	1	..	..	1	..	1	..	1	..	1	..	1	..	..	3	7	5	6	6	12
Asthma	3	..	2	..	3	1	..	1	..	..	1	..	1	..	..	..	1	..	1	..	..	1	3	..	6	12	15	3	18
Atelectasis Pulmonum	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	....	3	2	1	3
Atrophy, Muscular	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	..	..	..	..	..	..	..	..	1	2	1	2	3
Bladder, Disease of	..	..	..	..	..	..	..	..	..	..	..	..	2	..	1	..	..	..	1	..	..	..	..	..	2	2	4	...	4
" Inflammation of	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	....	...	1	1
Bones, Disease of	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	....	1	1	...	1
Bowels, Disease of	..	..	..	..	..	..	..	..	1	..	..	..	1	1	1	..	1	..	..	..	..	..	1	..	5	1	5	1	6
" Obstruction	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	2	1	1	2
" Perforation	1	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..	1	..	..	..	3	2	5	...	5
Brain, Disease of	1	2	4	2	1	3	1	1	4	4	..	1	3	2	2	1	5	1	1	2	2	2	4	3	27	25	28	24	52
" Congestion of	1	..	1	..	..	..	4	..	2	..	..	..	1	1	..	1	1	3	1	1	1	..	2	2	13	9	14	8	22
" Inflammation of	..	..	..	..	1	..	..	1	1	..	..	1	..	..	..	..	..	1	..	..	..	..	..	3	2	6	2	6	8
Bronchitis, Acute	8	10	9	6	12	13	7	6	7	7	8	6	3	1	1	2	3	10	3	5	6	4	11	5	55	98	78	75	153
" Chronic	1	3	1	..	1	..	1	..	1	..	2	1	2	2	..	..	..	..	..	1	1	3	2	1	5	18	12	11	23
Calculus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	....	1	1	...	1
Cancer, various	3	5	..	1	2	1	1	4	2	2	2	1	1	6	2	4	1	2	1	1	4	4	1	5	36	20	20	36	56
" of Bladder	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	....	1	...	1

TABLE VII. CAUSES OF DEATH, 1887.—Continued.

CAUSES OF DEATH.	Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		PARENTAGE.		SEX.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Am.	For.	M.	F.	Total.
Cancer, of Breast	..	1	..	2	..	1	..	5	..	..	..	3	..	2	..	1	..	2	..	..	..	..	..	4	15	6	...	21	21
" of Face and Nose	..	..	1	..	1	..	..	..	..	..	..	..	1	..	1	..	1	..	..	..	..	..	..	..	2	3	5	...	5
" of Lip	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	1	1	...	1
" of Liver	..	..	1	1	2	..	1	..	..	1	..	1	..	1	1	2	1	1	..	1	1	2	..	2	11	8	7	12	19
" of Mesentery	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	....	2	1	1	2
" of Ovaries	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	2	1	...	3	3
" of Prostate	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	....	1	...	1
" of Rectum	1	..	..	..	..	1	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	1	..	..	3	2	1	4	5
" of Spleen	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	....	1	...	1	1
" of Stomach	..	4	..	1	..	1	2	..	1	..	1	1	2	3	1	2	3	1	..	..	1	..	1	1	10	16	12	14	26
" of Uterus	..	2	..	2	..	1	..	2	..	..	..	..	..	4	..	1	..	1	..	2	..	..	..	3	15	3	...	18	18
Carbuncle	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	2	1	2	1	3
Cellulitis	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	....	1	1	...	1
" Pelvic	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	1	2	..	3	3
Cerebritis	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	4	....	2	2	4
Child-birth	..	1	..	1	..	2	..	3	..	1	..	2	..	1	..	1	..	1	..	..	..	..	..	1	3	11	...	14	14
" Puerperal Conv	..	..	..	..	..	1	..	..	..	1	..	1	..	1	..	1	..	1	..	..	..	1	..	..	4	3	...	7	7
" " Fever	..	3	..	2	..	3	..	1	..	1	..	1	..	1	..	1	..	3	..	1	..	..	..	4	4	17	...	21	21
" " Hem	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	....	2	...	2	2
" Monia	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	1	...	2	2
" Septicæmia	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	1	..	..	..	..	..	..	..	..	1	3	...	4	4
Cholera Infantum	1	..	1	1	1	1	..	1	..	2	6	6	65	57	58	31	30	30	9	4	2	..	1	1	125	183	174	134	308
" Morbus	..	..	1	..	..	..	..	..	..	1	1	1	4	1	4	4	..	1	1	..	1	..	..	..	4	16	12	8	20
" Sporadic	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	....	1	1	...	1

CAUSES OF DEATH.	Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		PARENTAGE.		SEX.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M	F.	M.	F.	M.	F.	M.	F.	Am.	For.	M.	F.	Total.
Chorea	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	....	1	...	1	1
Colic	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1	..	1	..	1	3	3	1	4
Colitis	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	1	1	...	2	2
Coma	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	1	..	..	2	2	1	3	4
Consumption	35	28	21	35	27	32	28	46	27	35	29	28	19	26	23	38	23	34	17	39	29	26	27	27	263	436	305	394	699
Convulsions	11	7	8	6	7	3	10	11	10	3	4	10	6	6	5	6	7	5	9	6	3	6	5	5	75	84	85	74	159
" Uræmic	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	1	1	..	..	1	3	1	3	4
Croup, Membraneous	1	4	6	1	3	3	3	4	4	2	3	3	3	2	5	3	5	4	9	9	7	10	9	10	43	70	58	55	113
Cyanosis	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	1	1	..	1	1	2	5	4	3	7
Cystitis	2	1	..	..	2	..	1	..	1	..	1	..	1	1	1	1	1	..	2	..	..	..	..	1	11	5	12	4	16
Debility	3	4	3	6	2	5	..	2	3	4	4	4	3	3	5	5	6	1	7	4	5	3	1	4	28	59	42	45	87
" Infantile	3	3	2	4	8	9	4	2	6	1	3	3	5	10	4	1	4	4	6	3	3	2	4	..	39	55	52	42	94
" Premature Birth	5	7	2	5	2	5	4	6	6	..	1	4	2	4	4	4	2	4	3	1	9	2	4	6	48	44	44	48	92
Delirium Tremens	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	....	1	1	...	1
Diabetes	1	1	2	..	2	..	3	..	1	..	..	..	..	..	2	..	..	1	1	..	..	1	1	2	12	6	13	5	18
" Mellitus	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	1	3	2	2	4
Diarrhœa	2	1	1	2	1	..	..	1	4	2	3	..	18	9	18	7	9	5	6	7	1	4	1	1	30	73	64	39	103
" Chronic	1	1	..	1	1	..	2	3	1	1	1	1	..	2	3	1	2	2	1	2	1	1	..	2	14	16	13	17	30
Diphtheria	13	15	5	8	4	3	4	4	6	14	11	8	7	14	10	11	19	16	23	21	19	20	14	18	101	186	135	152	287
Dropsy	1	2	..	2	..	1	1	4	..	1	2	1	3	2	2	1	3	2	1	1	..	4	1	..	22	13	14	21	35
Dysentery	..	..	..	1	..	1	1	1	..	2	..	2	9	7	10	8	4	8	2	2	1	1	..	..	23	37	27	33	60
" Chronic	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	2	1	1	2	3
" Typhoid	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	1	2	2	1	3
Dyspnœa	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	....	2	2	...	2
Embolism	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	..	..	1	..	1	4	1	2	3	5
Encephalitis	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	...	2

TABLE VIII.—CAUSES OF DEATH, 1887.—Continued.

CAUSES OF DEATH.	Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		PARENTAGE.		SEX.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Am.	For.	M.	F.	Total.
Enteritis	..	2	2	..	2	..	..	2	2	..	2	1	1	2	10	2	2	4	4	..	2	2	4	3	26	23	31	18	49
" Chronic	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	....	...	1	1
" Gastro	..	..	..	1	..	..	..	..	..	1	..	1	4	2	2	5	2	3	4	1	2	..	..	..	11	17	14	14	28
Entero Colitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	2	1	..	..	..	..	..	4	3	3	4	7
Epilepsy	1	1	..	2	..	..	2	..	..	..	1	1	1	1	..	2	1	..	1	1	..	..	1	1	10	7	8	9	17
Epistaxis	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	1	1	...	1
Erysipelas	..	2	2	1	3	2	4	..	1	..	3	1	..	..	..	2	..	..	..	1	..	..	..	3	11	14	13	12	25
Fever	..	..	..	..	..	1	..	..	..	..	..	..	2	..	..	..	2	2	2	..	1	..	..	..	3	7	7	3	10
" Gastric	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	...	1	1
" Intermittent	..	..	..	..	..	1	1	..	..	1	1	2	1	..	1	..	1	..	1	..	..	2	1	..	2	11	7	6	13
" Malarial	..	1	2	..	..	..	..	2	1	1	..	1	..	3	5	1	6	4	2	3	4	..	1	..	18	19	21	16	37
" " Typho	..	..	..	..	..	..	..	..	2	..	1	..	..	..	..	..	2	1	..	..	..	..	..	..	3	3	5	1	6
" Remittent	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	1	1	2	...	2
" Typhoid	3	8	4	2	3	2	1	2	3	4	4	2	2	4	10	8	6	8	10	7	7	3	7	6	54	62	60	56	116
Fistula	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	....	1	...	1
Gall Stones	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	1	1	2
Gangrene	1	..	..	..	..	..	..	..	1	..	..	..	1	..	2	..	1	..	..	..	..	..	..	..	5	1	6	..	6
" of Foot	..	..	1	..	..	..	..	..	..	1	..	1	..	..	1	..	..	..	..	..	..	..	..	..	2	2	2	2	4
" Senile	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	1	..	..	1	3	1	1	3	4
Gastralgia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	....	1	...	1	1
Gastritis, Acute	..	1	..	..	..	..	..	1	3	4	..	2	1	1	..	3	2	1	3	2	1	1	..	1	12	15	10	17	27
" Chronic	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	1	2	...	3	3
Goitre	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	1	...	1
Heart, Disease of	10	13	15	13	15	7	8	6	11	20	11	12	12	5	10	16	10	9	10	7	5	7	14	13	158	101	131	128	259

CAUSES OF DEATH.	Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		PARENTAGE.		SEX.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Am.	For.	M.	F.	Total.
Heart, Dilatation of	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	..	2	..	..	..	..	1	..	..	2	4	3	3	6
" Fatty Degeneration of	..	1	..	..	..	1	..	2	..	1	2	2	1	..	..	2	2	..	..	..	..	1	1	1	15	2	6	11	17
" Hypertrophy	1	1	..	2	..	1	..	1	..	1	..	1	..	..	..	1	1	..	..	..	1	..	..	..	8	3	3	8	11
" Inflammation of	1	..	1	1	2	..	2	3	..	..	1	1	1	4	..	1	..	2	1	3	3	..	1	1	7	22	13	16	29
" Valvular Disease of	..	4	5	1	2	..	1	5	1	..	7	3	4	4	2	..	5	5	2	3	1	6	2	1	35	29	32	32	64
Hæmatemesis	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	..	..	2	2	2	2	4
Hemiplegia	1	..	..	2	..	..	..	..	..	..	..	..	..	..	1	1	1	..	2	..	..	1	..	..	5	4	5	4	9
Hæmoptysis	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	2	..	..	..	..	..	..	..	....	5	5	...	5
Hemorrhage	1	..	1	1	1	..	..	2	1	..	1	..	..	3	..	..	..	..	..	..	1	1	..	1	7	7	6	8	14
" of Bowels	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	...	1	1
" of Lungs	1	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	2	..	..	1	..	3	3	2	4	6
Hepatitis	1	..	..	..	..	..	1	..	..	..	..	..	..	1	..	1	..	1	..	..	..	1	1	..	5	2	3	4	7
Hernia	..	..	1	..	2	1	..	2	..	..	1	..	1	2	..	..	..	..	..	..	..	3	..	..	6	7	5	8	13
Hip Joint, Disease of	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	....	2	2	...	2
Homicide	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1	2	...	2
Hydrocephalus	..	..	1	2	2	2	1	1	1	1	2	..	3	..	2	1	..	..	3	..	1	..	1	2	12	14	17	9	26
Hydrothorax	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	..	1	1
Icterus Neonatorum	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	1	2	3	...	3
Inanition	1	3	2	3	..	2	..	1	1	..	..	..	..	1	1	1	2	3	..	..	5	..	..	2	12	16	12	16	28
Insanity	3	2	4	..	2	1	5	1	6	3	2	3	4	6	3	4	2	4	..	..	1	1	3	4	33	31	35	29	64
Jaundice	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	1	..	..	..	1	2	5	4	3	7
Kidneys, Disease of	2	..	..	..	..	..	3	..	..	..	..	..	2	1	2	..	2	..	2	2	3	1	..	2	10	12	16	6	22
" Addison's Disease of	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	1	...	1	1
" Bright's Disease of	3	5	6	2	3	1	6	3	4	4	4	3	5	2	6	7	5	5	2	1	4	4	3	5	52	41	51	42	93
Laryngitis	..	..	..	..	..	..	..	1	1	1	..	2	..	..	..	..	1	..	..	1	..	1	..	..	4	4	2	6	8
Leucocythemia	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	1	2	3	...	3

TABLE VIII.—CAUSES OF DEATH, 1887.—Continued.

CAUSES OF DEATH.	Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		PARENTAGE.		SEX.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Am.	For.	M.	F.	Total.
Liver, Disease of	1	2	1	4	2	1	..	3	1	2	..	2	1	1	3	3	1	3	4	1	2	4	..	3	19	26	16	29	45
" Atrophy of	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	2	....	1	1	2
" Cirrhosis of	2	..	2	2	..	..	..	1	1	1	..	..	..	..	..	1	1	..	1	1	2	..	2	..	6	11	11	6	17
" Hypertrophy of	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	....	...	1	1
" Inflammation of	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	1	1	2
Locomotor Ataxia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	1	2	2	1	3
Lungs, Disease of	1	..	1	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	1	..	..	..	3	4	4	3	7
" Œdema of	..	..	..	..	..	..	2	2	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	3	3	3	3	6
Malaria	..	..	..	..	..	..	..	..	1	1	1	1	..	..	5	1	2	2	2	4	2	..	1	2	5	20	14	11	25
" Typhoid	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	....	2	1	1	2
Malformations	..	1	..	1	..	1	..	1	2	1	1	..	1	..	2	..	..	..	..	..	2	..	3	2	8	10	11	7	18
Malignant Pustule	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	1	1	...	1
Malnutrition	1	..	..	..	..	..	..	..	..	..	..	..	1	2	2	..	1	..	..	..	..	..	..	1	5	3	5	3	8
Marasmus	1	1	2	..	5	3	4	1	2	1	2	1	4	2	5	7	6	3	3	2	..	3	1	..	35	24	35	24	59
" Senile	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	....	2	...	2	2
Measles	3	5	7	7	10	16	26	16	9	10	4	3	5	3	2	2	1	1	2	..	..	..	..	..	57	75	69	63	132
Meningitis	2	4	7	1	8	3	6	3	5	2	10	3	5	7	7	4	7	1	2	..	5	2	1	2	48	49	65	32	97
" Cerebro-Spinal	1	1	1	2	1	2	..	..	1	.	1	..	1	1	3	4	..	..	1	1	..	..	3	..	11	13	13	11	24
" Spinal	..	..	..	1	1	..	1	1	..	1	..	..	..	2	..	..	..	..	1	..	..	1	1	..	5	5	4	6	10
" Tubercular	..	3	1	1	1	1	1	2	..	..	1	2	..	1	1	2	1	1	3	2	2	..	1	1	17	11	12	16	28
Menopanse	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	...	1	...	1	1
Mortification	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	...	1	1
Necrosis	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	1	1	...	1
Nephritis	1	1	..	..	4	4	1	2	1	3	2	1	1	1	1	3	2	..	..	1	1	3	2	2	20	17	16	21	37

CAUSES OF DEATH.	Jan.		Feb.		Mar.		April.		May.		June		July.		Aug.		Sept.		Oct.		Nov.		Dec.		PARENTAGE.		SEX.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M	F.	M	F.	M.	F.	M.	F.	M.	F.	Am.	For.	M.	F.	Total.
Neuralgia	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	....	1	1	1	2
Obstipation	..	..	..	1	..	..	2	..	..	2	..	1	..	..	..	1	..	..	1	..	..	..	..	..	5	3	3	5	8
Œsophagus, Stricture of	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	...	2
Old Age	10	15	4	12	10	15	5	18	8	8	10	13	8	17	11	21	14	20	3	9	10	15	10	12	167	111	103	175	278
Opium Habit	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	...	1	1
Ovariotomy	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	1	...	1	1
Paralysis	1	7	6	4	7	8	4	4	7	3	5	6	3	4	2	3	1	3	6	7	8	5	2	3	80	29	52	57	109
Paraplegia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	....	...	1	1
Peritonitis	3	4	3	2	2	2	3	2	1	5	4	1	3	5	2	1	3	3	..	2	2	5	3	2	27	35	29	34	63
" Acute	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	2	1	2	3
Perityphlitis	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	1	1	...	1
Phlebitis	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	1	2	1	2	3
Pleurisy	..	..	1	..	1	1	1	3	1	1	..	..	2	..	..	..	1	..	..	..	..	..	..	2	8	6	7	7	14
Pneumonia	30	25	26	32	41	47	43	21	23	19	16	9	8	5	5	5	7	7	10	12	17	15	26	13	214	248	252	210	462
" Conges. of Lungs	2	1	..	2	..	2	1	2	3	2	..	1	..	1	..	..	1	2	..	..	1	3	..	2	13	13	8	18	26
Polypus Nasi	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	....	...	1	1
Prostate, Disease of	2	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	4	3	7	...	7
Pyelitis	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	...	1	1
Pyæmia	..	..	..	..	1	..	..	..	..	..	..	..	2	1	..	..	..	1	..	..	1	..	1	..	4	3	5	2	7
Quinsy	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	...	...	1	1
Rachitis	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1	2	...	2
Rheumatism	2	2	1	..	2	2	3	..	..	3	..	1	..	4	1	2	..	2	1	2	..	..	2	1	17	14	12	19	31
" Acute	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	...	2	1	1	2
" Chronic	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	...	...	1	1
Scarlatina	6	6	1	4	4	2	1	2	3	3	1	4	7	5	8	5	13	15	20	33	25	33	31	34	95	171	120	146	266
Scrofula	1	..	..	..	..	..	..	1	1	1	..	..	1	1	1	..	..	1	..	..	..	1	1	..	4	6	5	5	10

TABLE VIII.—CAUSES OF DEATH, 1887.—Continued.

CAUSES OF DEATH.	Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		PARENTAGE.		SEX.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Am.	For.	M.	F.	Total.
Septicæmia	..	..	..	..	1	1	..	1	2	..	1	2	2	1	1	1	1	..	..	..	..	..	3	1	10	8	11	7	18
Skin, Diseases of	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	3	....	3	...	3
" Eczema	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	1	...	1	1
Spine, Disease of	1	1	2	..	..	..	2	1	1	..	..	..	..	2	..	1	..	2	2	..	..	..	..	1	8	8	8	8	16
" Inflammation of	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	3	....	2	1	3
Spleen, Disease of	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	....	...	1	1
Stomach, Disease of	..	1	2	1	..	..	1	1	1	2	3	..	..	2	1	2	1	..	2	1	..	..	1	1	10	13	12	11	23
" Inflammation of	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	1	....	3	2	1	3
" Ulceration of	..	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	1	1	..	..	..	..	..	2	3	1	4	5
Stomatitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	....	1	...	1
Suicide	2	1	2	..	..	..	1	1	5	..	..	1	..	..	..	..	..	..	1	..	2	..	..	..	8	8	13	3	16
Sunstroke	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	....	1	1	...	1
Syphilis	..	..	..	..	1	..	..	..	1	1	1	..	..	..	1	..	..	1	..	1	..	..	1	1	6	3	5	4	9
" Congenital	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	4	....	1	3	4
Tabes Mesenterica	..	..	..	..	..	2	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	..	..	1	2	4	2	4	6
Teething	1	..	1	1	2	2	3	..	..	..	..	1	..	1	3	1	2	3	1	..	1	1	..	..	8	16	14	10	24
Tetanus	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	....	2	2	...	2
Thrombosis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	....	..	1	1
Thrush	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	....	1	...	1
Tonsilitis	..	..	..	..	..	1	..	..	..	..	..	1	..	1	1	..	..	..	1	..	..	..	2	..	2	5	4	3	7
Trismus Nascentium	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	1	..	..	1	1	1	4	3	2	5
Tuberculosis	2	1	1	1	..	..	2	1	3	3	2	2	..	..	2	1	1	1	1	1	..	2	2	..	17	12	16	13	29
Tumors	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	2	..	1	..	..	1	..	..	..	4	2	2	4	6
" of Abdomen	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	1	..	..	....	3	...	3	3

CAUSES OF DEATH.	Jan.		Feb.		Mar.		April.		May.		June		July.		Aug.		Sept.		Oct.		Nov.		Dec.		PARENTAGE.		SEX.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Am.	For.	M.	F.	Total.
Tumor of Brain			1	1						1											1				1	3	2	2	4
" of Ovary		1		1				1		1															1	3		4	4
" of Uterus				1				2		2		1				1								1	3	5		8	8
Ulcers																1										1		1	1
Uræmia	1		1		1		1			1	1					2	2	2							6	5	7	4	11
Urethra, Stricture of																							1		1		1		1
Uterus, Disease of								1																		1		1	1
Vomiting																				1					1			1	1
" of Pregnancy										1															1			1	1
Whooping Cough		1			1	2	1	2					3	1	2			2	1	2	1			2	10	11	9	12	21
Unknown		3	1		1	1				2			1				2	1	1	1	2	1		2	8	11	8	11	19

TABLE VIII.—CAUSES OF DEATH, 1887.

Arranged Alphabetically; Showing the Number of each Sex, who died from each Cause, in each Period of Life.

CAUSES OF DEATH.	Under 1.		1 and under 2.		2 to 3.		3 to 5.		5 to 10.		10 to 15.		15 to 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 to 90.		90 and over.		Age not stated.		SEX.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Accidents, various	2	..	..	..	..	1	1	..	2	..	3	1	3	..	2	..	4	1	6	..	2	1	5	3	3	1	..	2	1	..	..	..	34	10	44
" Asphyxia	4	3	2	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	..	8	6	14
" Burns and Scalds	..	..	1	2	1	..	2	1	1	2	..	1	..	..	1	1	1	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	7	10	17
" Drowning	..	..	..	..	1	..	3	..	4	1	7	1	1	..	5	..	5	..	3	..	2	..	..	2	1	..	1	..	..	..	2	..	35	4	39
" Exposure	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
" Exposure to Cold	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	1	..	..	..	..	..	..	3	3	6
" Falls	..	..	1	..	..	..	2	..	..	..	1	1	1	..	2	..	1	..	..	..	1	..	2	2	..	3	..	..	..	..	..	..	11	6	17
" Fractures	..	..	..	..	..	..	..	..	1	..	1	..	..	..	6	1	3	..	1	..	4	..	2	..	1	1	..	..	1	1	..	..	20	3	23
" Gun Shot Wounds	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	3	..	3
" Heat	..	..	..	..	..	..	..	..	..	..	1	..	..	..	2	..	2	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	6	..	6
" Lightning	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
" Neglect	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
" Poison	1	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	5	2	7
" Railroad	..	..	..	..	..	..	..	..	..	..	1	..	..	..	4	1	6	..	4	2	2	..	2	..	..	1	..	..	..	..	1	..	20	4	24
" Surgical Operation	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Abortion	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	2
Abscesses	2	..	1	..	..	1	..	1	1	..	..	..	..	1	..	2	..	1	2	1	..	2	..	..	..	..	..	..	..	..	..	..	6	9	15
" Lumbar (psoas)	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	3
" Pelvic	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
Adenitis	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	1	2
Alcoholism	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	4	..	3	..	1	..	3	1	1	..	..	..	..	..	..	..	13	2	15

CAUSES OF DEATH.	Under 1.		1 and under 2.		2 to 3.		3 to 5.		5 to 10.		10 to 15.		15 to 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 to 90.		90 and over.		Age not stated.		SEX,		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Anæmia	..	2	..	..	..	..	..	..	..	1	..	1	..	1	..	2	..	..	..	2	1	2	..	..	..	1	..	..	..	..	..	..	1	12	13
Anasarca	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	1	..	..	..	..	2	2	4
Aneurism	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	1	1
" Aorta	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	2	3
" Thoracic	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	...	1
Angina Pectoris	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	..	5	1	..	..	..	..	..	..	7	4	11
Apoplexy	1	..	..	..	..	..	..	..	..	..	..	..	1	1	3	2	4	3	11	8	22	16	28	28	27	31	5	15	..	..	..	..	102	104	206
Arthrites	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	...	1	1
Asthenia	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	3	2	1	1	..	2	..	..	6	6	12
Asthma	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	2	..	2	1	2	..	6	2	1	..	..	..	..	..	..	..	15	3	18
Atelectasis Pulmonum	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3
Atrophy, Muscular	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	1	2	3
Bladder, Disease of	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..	..	..	..	..	..	..	4	...	4
" Inflammation of	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	...	1	1
Bones, Disease of	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	...	1
Bowels, Disease of	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	1	1	..	..	..	..	..	..	5	1	6
" Obstruction	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	1	2
" Perforation	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	2	..	..	..	..	..	..	..	..	..	5	...	5
Brain, Disease of	4	3	2	2	..	..	..	..	..	..	..	2	1	..	..	1	1	2	2	2	2	3	2	5	9	3	5	1	..	..	..	..	28	24	52
" Congestion of	6	3	2	..	..	..	..	1	2	1	..	1	..	..	..	..	1	..	1	1	..	..	1	..	1	..	..	1	..	..	..	..	14	8	22
" Inflammation of	1	2	..	..	..	3	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	2	6	8
Bronchitis, Acute	28	22	15	7	5	4	1	4	1	1	..	1	..	4	2	6	3	3	..	3	8	5	8	6	4	6	3	2	..	1	..	..	78	75	153
" Chronic	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	1	..	..	2	..	2	3	6	..	2	3	..	1	..	1	..	..	12	11	23
Calculus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	...	1
Cancer, various	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	2	5	..	5	7	8	5	9	3	4	1	3	..	1	..	..	20	36	56

TABLE VIII.—CAUSES OF DEATH, 1887.—Continued.

CAUSES OF DEATH.	Under 1.		1 and under 2.		2 to 3.		3 to 5.		5 to 10.		10 to 15.		15 to 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 to 90.		90 and over.		Age not stated.		SEX.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Cancer, of Bladder																									1								1		1
" of Breast																		4		3		6		3		1		3		1				21	21
" of Face and Nose																							1		2		2						5		5
" of Lip																							1										1		1
" of Liver																		2	1	2	3	3	3	2		3							7	12	19
" of Mesentery																					1	1											1	1	2
" of Ovaries																1						1				1								3	3
" of Prostate																									1								1		1
" of Rectum															1							3		1									1	4	5
" of Spleen																				1														1	1
" of Stomach																		3		4	4	4	3		5	3							12	14	26
" of Uterus																		2		4		9		1		2								18	18
Carbuncle																	1					1			1								2	1	3
Cellulitis																					1												1		1
" Pelvic																1		2																3	3
Cerebritis	1				1			1		1																							2	2	1
Child-birth														2		5		6		1														14	14
" Puerperal Conv																2		4		1														7	7
" " Fever																14		6		1														21	21
" " Hem																1		1																2	2
" Mania																2																		2	2
" Septicæmia														1		1		2																4	4
Cholera Infantum	146	110	24	21	4	3																											174	134	308
" Morbus					2	1	2			1						2	1		1		2		3	2	1	2							12	8	20

CAUSES OF DEATH.	Under 1.		1 and under 2.		2 to 3.		3 to 5.		5 to 10.		10 to 15.		15 to 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 to 90.		90 and over.		Age not stated.		SEX.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Cholera, Sporadic	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	...	1
Chorea	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	1	1
Colic	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	3	1	4
Colitis	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	2	2
Coma	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	1	..	1	..	..	..	..	1	3	4
Consumption	4	8	2	3	..	2	4	3	3	6	6	14	29	49	71	117	72	74	45	44	31	22	24	27	11	16	1	6	..	..	2	3	305	394	699
Convulsions	65	43	5	17	7	6	3	5	4	2	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	85	74	159
" Uræmic	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	4
Croup, Membranous	15	11	15	9	7	9	13	15	7	10	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	58	55	113
Cyanosis	4	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	4	3	7
Cystitis	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	1	5	1	1	1	..	..	..	..	12	4	16
Debility	12	9	2	..	1	..	..	..	1	1	..	..	1	..	..	..	2	..	..	1	3	3	8	16	9	10	2	4	..	1	1	..	42	45	87
" Infantile	49	42	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	52	42	94
" Premature Birth	44	48	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	44	48	92
Delirium Tremens	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	...	1
Diabetes	1	..	1	..	..	..	..	..	2	..	..	..	..	2	1	..	1	..	4	..	2	1	..	1	1	1	..	..	..	..	..	..	13	5	18
" Mellitus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1	..	..	1	..	..	..	..	..	..	2	2	4
Diarrhœa	39	17	7	4	1	..	3	..	2	..	..	..	..	..	2	..	1	2	2	..	1	3	1	8	2	3	3	2	..	..	..	..	64	39	103
" Chronic	1	2	..	..	1	..	..	..	..	1	..	..	..	..	2	1	1	..	..	2	2	1	3	2	..	7	3	1	..	..	..	..	13	17	30
Diphtheria	9	11	18	22	18	22	36	45	44	38	5	8	2	5	3	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	135	152	287
Dropsy	..	..	..	..	..	..	..	..	2	1	1	1	..	2	..	..	2	2	1	1	..	1	4	7	2	5	2	1	..	..	..	..	14	21	35
Dysentery	14	5	2	4	..	..	2	3	..	1	..	..	..	..	..	1	..	4	..	2	3	4	3	1	1	3	2	4	..	1	..	..	27	33	60
" Chronic	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	1	2	3
" Typhoid	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	2	1	3
Dyspnœa	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	2	...	2

TABLE VIII.—CAUSES OF DEATH, 1887.—Continued.

CAUSES OF DEATH.	Under 1.		1 and under 2.		2 to 3.		3 to 5.		5 to 10.		10 to 15.		15 to 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 to 90.		90 and over.		Age not stated.		SEX.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Embolism	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	2	..	..	..	..	2	3	5
Encephalitis	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	...	2
Enteritis	8	3	2	1	2	..	1	1	2	1	1	1	3	..	4	1	3	..	..	..	..	1	2	4	2	3	1	2	..	..	..	..	31	18	49
" Chronic	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	...	1	1
" Gastro	8	7	1	2	..	1	1	..	1	..	..	..	..	..	..	..	..	1	..	..	1	1	1	1	1	1	..	..	..	..	..	..	14	14	28
Entero Colitis	3	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	4	7
Epilepsy	..	..	..	..	..	..	..	..	..	..	1	..	1	2	1	1	2	2	..	1	..	2	1	..	1	1	1	..	..	..	..	..	8	9	17
Epistaxis	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	...	1
Erysipelas	4	3	2	..	..	..	..	..	..	1	..	..	..	..	..	3	..	1	2	..	2	1	1	1	1	1	1	1	..	..	..	..	13	12	25
Fever	2	..	..	..	..	1	2	..	2	1	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	7	3	10
" Gastric	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	...	1	1
" Intermittent	2	2	..	..	..	..	1	..	..	1	1	..	..	..	1	1	1	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	7	6	13
" Malarial	2	1	1	2	1	..	2	..	2	2	1	..	1	..	1	2	..	1	2	1	2	2	3	1	1	4	2	..	..	..	..	..	21	16	37
" " Typho	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	2	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	5	1	6
" Remittent	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	...	2
" Typhoid	..	1	..	..	1	..	1	3	5	5	1	6	8	8	20	11	9	7	5	4	3	2	3	4	1	3	2	2	..	..	1	..	60	56	116
Fistula	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	...	1
Gall Stones	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1	1	2
Gangrene	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	1	..	..	..	1	..	1	..	1	..	..	..	..	..	6	..	6
" of Foot	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	..	..	1	..	..	..	2	2	4
" Senile	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1	1	..	..	..	..	1	3	4
Gastralgia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	...	1	1
Gastritis, Acute	2	2	..	..	..	..	..	2	..	..	..	..	1	..	1	..	..	1	1	..	2	5	1	..	2	1	..	5	..	1	..	..	10	17	27
" Chronic	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	...	3	3

CAUSES OF DEATH.	Under 1.		1 and under 2.		2 to 3.		3 to 5.		5 to 10.		10 to 15.		15 to 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 to 90.		90 and over.		Age not stated.		SEX.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Goitre	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	...	1
Heart, Disease of	5	10	1	..	1	..	..	1	2	3	3	2	6	4	7	7	8	6	14	10	25	16	27	28	20	30	12	10	..	1	..	..	131	128	259
" Dilatation of	..	—	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	..	1	..	..	..	1	..	1	..	..	..	..	3	3	6
" Fatty Degeneration of.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	2	2	2	1	2	1	3	..	..	..	..	6	11	17
" Hypertrophy.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	2	2	2	1	3	..	..	..	..	..	..	3	8	11
" Inflammation of	..	..	..	..	..	..	..	..	2	1	3	..	..	1	2	1	1	3	1	4	..	3	2	1	2	2	..	..	..	..	..	..	13	16	29
" Valvular Disease of	2	..	1	..	..	..	..	..	..	..	1	2	..	..	2	6	3	..	1	..	2	4	7	5	11	8	1	6	1	1	..	..	32	32	64
Hæmatemesis	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	2	2	4
Hemiplegia	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1	..	..	1	1	1	..	1	..	1	1	..	..	..	..	..	5	4	9
Hæmoptysis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	2	..	1	..	..	..	..	..	..	..	..	..	5	...	5
Hemorrhage	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	2	3	..	..	..	1	1	1	..	..	..	..	..	..	6	8	14
" of Bowels	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	...	1	1
" of Lungs	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	2	2	..	..	..	..	..	..	..	2	4	6
Hepatitis	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	..	2	..	1	..	..	..	..	..	..	3	4	7
Hernia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	2	..	2	2	1	5	..	..	..	..	..	..	..	..	5	8	13
Hip Joint, Disease of	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	2	...	2
Homicide	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	2	...	2
Hydrocephalus	12	5	2	1	..	2	1	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	17	9	26
Hydrothorax	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	1	1
Icterus Neonatorum	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	...	3
Inanition	10	11	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	1	1	..	..	1	..	..	..	..	..	..	12	16	28
Insanity "	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	4	4	2	9	6	6	4	7	7	7	5	1	1	..	..	..	..	35	29	64
Jaundice	..	1	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	1	..	..	..	..	..	..	4	3	7
Kidneys, Disease of	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	1	1	2	..	5	1	4	1	2	1	1	..	..	..	..	..	16	6	22
" Addison's Disease of.	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	1	1

TABLE VIII.—CAUSES OF DEATH, 1887.—Continued.

CAUSES OF DEATH.	Under 1.		1 and under 2.		2 to 3.		3 to 5.		5 to 10.		10 to 15.		15 to 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 to 90.		90 and over.		Age not stated.		SEX		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Kidneys, Bright's Disease of	..	..	..	..	..	..	..	..	1	..	..	1	..	1	2	6	5	7	15	3	9	8	10	7	9	7	..	1	..	1	..	..	51	42	93
Laryngitis	..	1	1	1	..	1	..	1	..	1	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	6	8
Laucocythemia	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	3	...	3
Liver, Disease of	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	1	2	1	3	5	4	5	4	11	1	4	..	1	..	..	..	..	16	29	45
" Atrophy of	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	1	2
" Cirrhosis of	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	3	3	..	..	6	3	..	..	..	..	..	..	..	..	11	6	17
" Hypertrophy of	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	...	1	1
" Inflammation of	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	1	1	2
Locomotor Ataxia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1	..	..	..	..	..	..	..	2	1	3
Lungs, Disease of	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	1	1	..	..	..	1	..	..	..	..	..	..	4	3	7
" Œdema of	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	..	..	..	2	..	..	..	..	3	3	6
Malaria	..	1	1	..	1	..	..	1	..	2	2	..	2	..	2	1	..	1	..	..	1	1	4	2	..	1	1	1	..	..	..	..	14	11	25
" Typhoid	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2
Malformations	10	7	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	7	18
Malignant Pustule	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	...	1
Malnutrition	5	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	3	8
Marasmus	28	15	3	3	1	1	..	1	1	..	..	1	..	..	..	..	..	..	..	..	1	1	..	1	..	1	1	..	..	..	..	..	35	24	59
" Senile	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	...	2	2
Measles	21	17	19	23	12	11	6	10	8	1	1	..	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	69	63	132
Meningitis	25	13	9	5	3	3	6	2	9	5	2	1	2	..	5	..	3	1	..	1	..	..	..	..	..	1	1	..	..	..	..	..	65	32	97
" Cerebro-Spinal	3	2	2	..	2	3	1	1	2	2	1	..	1	1	..	1	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	13	11	24
" Spinal	1	2	1	2	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	4	6	10
" Tubercular	4	4	2	3	3	1	..	4	3	1	..	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12	16	28
Menopause	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	...	1	1

CAUSES OF DEATH.	Under 1.		1 and under 2		2 to 3.		3 to 5.		5 to 10.		10 to 15.		15- to 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 to 90.		90 and over.		Age not stated.		SEX.		
	M.	F.	M.	F.	M.	F.	M	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M	F.	M.	F.	M	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Mortification	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	...	1	1
Necrosis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	...	1
Nephritis	..	..	..	..	..	..	..	..	1	2	..	2	..	..	..	4	2	3	2	2	5	5	3	1	1	2	2	..	..	..	..	..	16	21	37
Neuralgia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2
Obstipation	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	2	..	1	..	..	..	1	..	1	..	..	3	5	8
Œ-ophagus, Stricture of	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	2	...	2
Old Age	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	7	29	42	54	80	18	46	..	..	103	175	278
Opium Habit	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	...	1	1
Ovariotomy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	...	1	1
Paralysis	..	3	..	..	..	..	2	1	..	1	1	..	..	..	..	..	1	3	3	3	5	4	20	12	13	23	7	6	..	1	..	..	52	57	109
Paraplegia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	1	1
Peritonitis	1	..	..	1	..	..	..	1	..	..	3	..	6	3	5	7	6	6	2	2	4	5	2	6	..	2	..	1	..	..	..	..	29	34	63
" Acute	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	1	2	3
Perityphlitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	...	1
Phlebitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	2	3
Pleurisy	..	..	..	..	..	..	1	..	..	1	..	..	1	..	1	2	2	..	1	2	..	..	1	2	..	..	..	..	..	..	..	..	7	7	14
Pneumonia	29	22	18	22	10	5	5	11	4	7	5	2	3	4	23	6	25	17	30	18	33	22	30	33	24	27	12	11	1	3	..	..	252	210	462
" Conges. of Lungs	..	5	2	..	1	1	..	1	1	3	..	..	..	..	..	3	1	..	1	2	..	1	..	1	1	1	..	..	1	..	..	..	8	18	26
Polypus Nasi	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	...	1	1
Prostate, Disease of	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	4	..	1	..	1	..	..	..	7	...	7
Pyelitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	...	1	1
Pyæmia	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	..	1	1	1	..	..	..	..	..	5	2	7
Quinsy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	1	1
Rachitis	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	...	2
Rheumatism	..	..	..	..	..	..	..	..	1	1	..	1	3	..	1	..	1	..	..	3	..	8	2	2	2	4	2	..	..	..	..	..	12	19	31

5

TABLE VIII.—CAUSES OF DEATH, 1887.—Continued.

CAUSES OF DEATH.	Under 1.		1 and under 2.		2 to 3.		3 to 5.		5 to 10.		10 to 15.		15 to 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70		70 to 80.		80 to 90		90 and over.		Age not stated.		SEX.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
" Acute																			1	1													1	1	2
" Chronic																								1										1	1
Scarlatina	11	9	20	25	19	27	24	31	40	42	5	7	1	3		2																	120	146	266
Scrofula		1	3			1	1							1		2							1										5	5	10
Septicæmia	2				1								1		1	2		1	2	1	3		1	3									11	7	18
Skin, Diseases of	2																				1												3		3
" Eczema		1																																1	1
Spine, Disease of	2	3					2	1								1	3	1		2			1										8	8	16
" Inflammation of											1						1									1							2	1	3
Spleen, Disease of																								1										1	1
Stomach, Disease of	2	4	2	1						1					1					1	2	2	3	2	1		1						12	11	23
" Inflammation of																			1		1			1									2	1	3
" Ulceration of																		1					1	2		1							1	4	5
Stomatitis	1																																1		1
Suicide															1		2	2	3		6	1					1						13	3	16
Sunstroke															1																		1		1
Syphilis	2													1	2		1	1	1	1				1									5	4	9
" Congenital	1	2		1																													1	3	4
Tabes Mesenterica	1	4													1																		2	4	6
Teething	9	4	4	6	1																												14	10	24
Tetanus									1										1														2		2
Thrombosis																1																		1	1
Thrush	1																																1		1
Tonsilitis	1	1		1	1	1			1		1																						4	3	7

CAUSES OF DEATH.	Under 1.		1 and under 2.		2 to 3.		3 to 5.		5 to 10.		10 to 15.		15 to 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 to 90.		90 and over.		Age not stated.		SEX.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Trismus Nascentium	3	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	5
Tuberculosis	1	1	1	2	1	..	1	..	1	..	..	1	..	2	5	4	2	2	1	..	..	..	2	1	1	..	..	..	..	..	..	..	16	13	29
Tumors	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	1	..	..	1	..	..	..	..	..	..	..	2	4	6
" of Abdomen	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	...	3	3
" of Brain	..	1	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	4
" of Ovary	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	1	..	..	..	..	..	..	..	..	...	4	4
" of Uterus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	3	..	2	..	..	..	1	..	..	..	..	..	..	...	8	8
Ulcers	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	1	1
Uræmia	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	2	1	2	2	..	2	..	..	..	..	..	..	..	7	4	11
Urethra, Stricture of	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	...	1
Uterus, Disease of	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	...	1	1
Vomiting	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	1	1
" of Pregnancy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	1	1
Whooping Cough	5	3	3	5	1	1	..	2	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	12	21
Unknown	2	2	1	1	..	..	..	1	..	1	..	..	..	1	..	..	..	2	1	1	..	1	2	1	1	..	..	..	..	..	1	..	8	11	19

TABLE IX.—CLASSIFICATION AND PERCENTAGE, 1887.

Showing what part of the Mortality in the Whole State, and in each Division is ascribed to each cause and class of causes.

NUMBER OF DEATHS IN EACH DIVISION OF THE STATE.											PERCENTAGE OF DEATHS IN EACH DIVISION.							
Bristol County.	Kent County.	Newport County Towns.	Newport City.	Providence County Towns.	Pawtucket City.	Providence City.	Washington County.	Whole State.	CAUSES OF DEATH.	Percentage in the Whole State.	Washington County.	Providence City.	Pawtucket City.	Providence County Towns.	Newport City.	Newport County Towns.	Kent County.	Bristol County.
217	343	128	313	1,795	553	2,640	351	6,340	All Causes	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
217	343	126	309	1,795	550	2,630	351	6,321	Causes Specified	99.72	100 00	99.62	99.46	100.00	98.72	98 44	100.00	100.00
....	....	2	4	......	3	10	....	19	Causes not Specified	.28	.....	.48	.54	.....	1.28	1.56	......	.....
									CLASSES.									
63	105	18	70	530	143	722	90	1,741	I. ZYMOTIC DISEASES	27.47	25.64	27.35	25.86	29.53	22.36	14.06	30.61	29.03
44	53	18	49	271	98	478	68	1,079	II. CONSTITUTIONAL DISEASES.	17.02	19.37	18.11	17.72	15.10	15.66	14.06	15.45	20 28
75	131	56	128	670	185	1,122	134	2,502	III. LOCAL DISEASES	39.47	38.18	42.46	33.63	37.32	40.89	43 75	38.19	34.56
27	41	25	44	245	101	224	41	748	IV. DEVELOPMENTAL DISEASES	11.79	11.68	8.52	18.27	13.65	14.05	19 53	11.95	12.44
8	13	11	22	79	25	94	18	270	V. VIOLENCE AND OTHERWISE	4.25	5.13	3 56	4 52	4 40	7.04	8 60	3.80	3.69
									ORDERS.									
									CLASS I.									
60	99	16	66	518	136	708	88	1,691	Miasmatic	26.64	25.06	26.82	24.59	28.86	21.08	12.50	28.86	27.65
1	4	2	2	12	2	9	1	33	Enthetic	.52	.29	.34	.36	.67	.64	1.56	1.17	.46
2	2	....	2	......	5	4	1	16	Dietic	.25	.29	.15	.91	.....	.64	......	.58	.92
....	....	..	....	......	...	1	....	1	Parasitic	.02	......	.04	......	......	.....	......	......	......

									CLASS II.									
14	18	8	13	71	23	99	18	264	Diathetic	4.16	5.12	3.75	4.16	4.04	4 16	6.25	5.25	6.44
30	35	10	36	200	75	379	50	815	Tubercular....................	12.86	14.25	14.36	13.56	11.06	11.50	7.81	10.20	14.84
									CLASS III.									
34	41	16	34	242	56	321	35	779	Dis. of Nervous System.... ...	12.30	9.98	12.12	10.13	13.48	10.86	12.50	11.95	15 67
8	21	11	25	88	36	196	26	411	Dis. of Circulatory System.....	6.48	7.41	7.42	6.52	4.90	7.99	8.59	6.13	3.69
18	38	19	42	177	48	336	43	721	Dis. of Respiratory Organs.....	11.37	12.24	12.70	8.68	9.85	13.41	14.84	11.08	8.30
7	22	4	11	89	29	126	19	307	Dis. of Digestive Organs.......	4.84	5.42	4.77	5 24	4.96	3 52	3 14	6.41	3 22
7	7	6	13	54	11	111	11	220	Dis. of Urinary Organs........	3.47	3.13	4.24	1.98	3.01	4.15	4.68	2.04	3 22
1	..	.....	...	2	4	11	....	18	Dis. of Reproductive Organs...	.30	......	.42	.72	.11	....	......	.....	.46
....	1	....	2	6	2	14	...	25	Dis. of Os. and Locomo. System	.40	......	.53	.36	.33	.64	.....	.29	......
...	1	....	1	12	...	7	....	21	Dis. of Integument. System ...	.33	......	.26	......	.68	.32	......	.29	......
									CLASS IV.									
10	16	11	17	130	37	114	10	345	Develop. Dis. of Children......	5.44	2.86	4.32	6.70	7.25	5.43	8.59	4.67	4.60
...	5	....	1	9	4	14	...	33	Divelop. Dis. of Women.......	.52	......	.55	.72	.50	.32	.....	1.46	......
17	19	12	17	64	45	76	28	278	Develop. Dis. of Old Age......	4 38	7.97	2.89	8.14	3.56	5.43	9.38	5 53	7.84
....	1	2	9	42	15	20	3	92	Develop. Dis. of Nutrition. ...	1.45	.85	.76	2.71	2.34	2.88	1.56	.29	......
									CLASS V.									
5	11	7	16	61	20	71	15	206	Accident and Neglect..........	3.25	4.28	2.69	3.62	3.40	5.12	5.47	3.21	2.31
...	....	....	...	......	...	2	....	2	Homicide......................	.03	......	.07	......	......	......	... .	......	......
2	..	..	2	5	..	7	....	16	Suicide.......................	.22	......	.27	......	.28	.64	......	......	.92
1	2	4	4	13	5	14	3	46	Various.......................	.72	.85	.53	.90	.72	1.28	3.13	.59	.46
									CLASS I.—ZYMOTIC.									
									Order One.—Miasmatic Dis.									
...	...	....	...	......	....	3	....	3	Carbuncle.	.05	.....	.11	......	......	......	......	......	......
16	16	4	31	125	35	119	9	355	Cholera Infantum	5.60	2.57	4 51	6 32	6 96	9.89	3.13	4.65	7.37
1	1	...	2	5	...	7	1	17	Cholera Morbus.......	.27	.29	.27	......	.28	.64	......	.29	.46
...	..	....	...	1	....	......	....	1	Cholera Sporadic..............	.02	......	......	.....	.06	......	... ..	......	......
9	12	1	3	26	17	39	6	113	Croup (Pseudo Membranous)....	1.79	1.71	1 48	3.08	1.45	1.96	.78	3.50	4.15

TABLE IX.—CLASSIFICATION AND PERCENTAGE, 1887.—Continued.

Number of Deaths in each Division of the State.											Percentage of Deaths in each Division.							
Bristol County.	Kent County.	Newport County Towns.	Newport City.	Providence County Towns.	Pawtucket City.	Providence City.	Washington County.	Whole State.	CAUSES OF DEATH.	Percentage in the Whole State.	Washington County.	Providence City.	Pawtucket City.	Providence County Towns.	Newport City.	Newport County Towns.	Kent County.	Bristol County.
5	8	1	2	44	20	49	4	133	Diarrhœa	2.09	1.14	1.86	3.62	2.45	.64	.78	2.34	2.31
15	11	1	3	88	26	108	35	287	Diphtheria	4.53	9 95	4.09	4.70	4.90	.96	.78	3.21	6.91
1	8	....	1	20	8	23	5	66	Dysentery	1.04	1.42	.87	1.45	1.11	.32	.....	2.34	.46
2	2	....	....	9	3	15	1	32	Erysipelas	.52	.29	.57	.54	.50	.64	.....	.58	.92
....	5	...	2	5	1	8	3	24	Fever, Cerebro Spinal	.38	.85	.30	.18	.28	.....	.....	1.46	.....
....	...	...	....	9	1	3	...	13	Fever, Intermittent	.21	.....	.11	.18	.50	.....	.....	.....	.....
....	1	3	..	33	7	26	2	72	Fever, Malarial	1.13	.57	.99	1.27	1.85	.....	2.34	.29	.....
2	14	5	4	34	7	38	13	117	Fever, Typhoid	1.85	3.71	1.44	1.27	1.89	1.28	3.91	4 09	.92
....	....	....	....	8	....	......	2	10	Fever, Unspecified	.16	.57	.....	.....	.45	.....	.....	.....	.....
....	5	....	8	19	7	90	3	132	Measles	2.08	.85	3.40	1.27	1 06	2.55	.....	1 46	.....
....	....	....	3	5	1	12	....	21	Metria (Fever Puerperal)	.32	.....	.46	.18	.28	.96	.....	.....	.....
....	....	1	3	6	....	10	1	21	Pertussis	.32	.29	.38	.....	.33	.96	.78	.....	.....
....	....	....	...	4	...	4	....	8	Tonsillitis	.13	.....	.15	.....	.22	.....	.....	.....	.....
9	16	....	4	77	3	154	3	266	Scarlatina	4.20	.85	5 83	.54	4 29	1.28	.....	4.65	4.15
									Order Two.—Enthetic Dis.									
1	....	....	....	......	....	......	..	1	Gonorrhœa	.02	.....	.....	.....	.....	.....	.....	.....	.46
....	...	....	....	......	....	1	...	1	Malignant Pustule	.02	.....	.04	.....	.....	.....	.....	.....	.....
....	3	1	2	7	1	3	1	18	Septicæmia	.27	.29	.11	.18	.39	.64	.78	.88	.....
....	1	1	....	5	1	5	....	13	Syphilis	.22	...	.19	.18	.28	.....	.78	.29	.....
									Order Three.—Dietic Dis.									
2	1	....	2	.....	5	4	1	15	Alcoholism	.23	.29	.15	.91	.....	.64	....	.29	.92
....	1	...	...	......	....	......	....	1	Delirium Tremens	.02	...	.....	.....	.....	.....	.....	.29	.....

									Order Four.—Parasitic Dis.									
....	....	....	....	......	...	1	...	1	Apthæ..................	.02	......	.04	......	......	......	....	......	......
									CLASS II.—CONSTITUTIONAL.									
									Order One.—Diathetic Dis.									
2	11	3	1	13	3	1	5	39	Dropsy....................	.62	1.42	.04	.54	.72	.32	2.34	3.21	.92
...	....	...	1	......	....	......	..	1	Gout...............	.02	......	......	......	......	.32	......	......	......
....	....	....	....	8	..	8	...	16	Anæmia	.25	.....	.30	1.28	.45	......	......	......	......
6	3	4	5	19	7	24	2	70	Cancer (various)	1.11	.57	.91	.....	1.05	1.60	3.13	.88	2.76
....	....	...	1	4	...	15	1	21	Cancer of Breast............	.31	.29	.57	.....	.22	.32	.. ..	......	......
....	...	..	..	3	2	13	1	19	Cancer of Liver	.30	.29	.50	.36	.17	.....	.....	......	.....
....	1	...	...	.....	1	3	....	5	Cancer of Rectum............	.10	.....	.11	.18	.....	.....	.....	.29	......
2	1	....	...	4	2	14	3	26	Cancer of Stomach...........	.41	.84	.53	.36	.22	......	......	.29	......
....	....	....	...	4	3	11	...	18	Cancer of Uterus	.27	......	.41	.54	.22	.....	... ..	. ..	......
....	1	..	4	3	...	6	1	15	Mortification.................	.23	.29	.23	......	.17	1.28	......	.29	.....
4	1	1	1	13	5	4	5	34	Rheumatism	.54	1.42	.15	.90	1.72	.32	.78	.29	1.84
									Order Two.—Tubercular.									
3	....	....	2	11	1	27	1	45	Scrofula	.72	.29	1.03	.18	.61	.64	......		1.39
....	....	....	...	......	....	6	...	6	Tabes Mesenterica...........	.09	.....	.23	......		.... ..		....	......
20	34	10	31	174	72	323	46	710	Phthisis (Pulmonary)	11.19	13.10	12 23	13.02	9.61	9.90	7.81	9.91	9.22
7	1	....	1	6	1	9	1	26	Hydrocephalus.	.41	.29	.34	.18	.34	.32	......	.29	3.23
....	....	....	2	9	1	13	2	28	Tubercular Meningitis..........	.44	.57	.53	.18	.50	.64	......	......	......
									CLASS III.—LOCAL.									
									Order One.—Dis. of the Nervous System.									
3	3	....	6	17	17	58	1	105	Cephalitis.......	1.66	.29	2.20	3.08	.95	1.91	......	.88	1.38
....	....	....	2	1	1	3	...	7	Cerebritis................ ...	.11	. ...	.11	.18	.06	.64	......	.....	.....
11	16	6	7	38	17	100	11	206	Apoplexy................... .	3.25	3.13	3.79	3.08	2.13	2.23	4.69	4 65	5.07
10	11	5	5	42	4	28	17	122	Paralysis....	1.92	4.85	1.05	.72	2.34	1.60	3.91	3.21	4.62
1	....	....	1	56	...	6	..	64	Insanity	1.01	.....	.23	......	3.13	.32	......	......	.46
....	...	....	...	1	....	......	...	1	Chorea.......................	.02	......	......	......	.06	......	......	......	.....
1	....	1	1	6	1	6	1	17	Epilepsy	.25	.29	.23	.18	.34	.32	.78	......	.46
....	....	....	2	2	1	2	...	7	Tetanus	.11	......	.07	.18	.11	.64	......	......	......
3	5	3	5	45	10	84	4	159	Convulsions....	2 51	1.13	3.18	1.81	2.46	1.60	2 34	1 46	1.38
5	6	1	5	34	5	34	1	91	*Brain Diseases**............	1.44	.29	1.26	.90	1.89	1 60	.78	1.75	2.30

TABLE IX.—CLASSIFICATION AND PERCENTAGE, 1887.—Continued.

Number of Deaths in each Division of the State.											Percentage of Deaths in each Division.							
Bristol County.	Kent County.	Newport County Towns.	Newport City.	Providence County Towns.	Pawtucket City.	Providence City.	Washington County.	Whole State.	CAUSES OF DEATH.	Percentage in the Whole State.	Washington County.	Providence City.	Pawtucket City.	Providence County Towns.	Newport City.	Newport County Towns.	Kent County.	Bristol County.
									Order Two.—Diseases of the Circulatory System.									
1	...	...	...	...	1	3	...	5	Aneurism	.08	...	.11	.18	...	...	...	...	.46
...	...	...	2	6	7	14	...	29	Pericarditis	.46	...	.53	1.27	.34	.64	...	...	...
7	21	11	23	82	28	179	26	377	Heart Diseases	5.94	7.41	6.78	5 07	4.56	7.35	8.59	6.13	3.23
									Order Three.—Diseases of the Respiratory Organs.									
...	2	3	...	8	3	3	1	20	Asthma	.31	.29	.11	.54	.45	...	2.34	.58	...
2	6	8	10	38	16	72	1	153	Bronchitis, Acute	2.41	.29	2.73	2.90	2.12	3 20	6.25	1.75	.92
1	...	...	1	8	1	12	...	23	Bronchitis, Chronic	.36	...	.42	.18	.45	.32	...	...	.46
...	...	...	...	...	...	1	...	1	Epistaxis	.02	...	.04	...	...	...	...	...	...
...	...	...	...	1	...	7	...	8	Laryngitis	.13	...	.27	...	.06	...	...	...	...
...	2	...	..	3	2	7	1	15	Pleurisy	.23	.29	.27	.36	.17	...	...	.58	...
13	27	8	31	117	25	227	40	488	Pneumonia	7.70	11.37	8.59	4.52	6.50	9.89	6.25	7.88	6.00
2	1	...	...	2	1	7	...	13	Lung Diseases	.21	...	.27	.18	.11	...	...	.29	.92
									Order Four.—Diseases of Digestive Organs.									
1	6	2	2	9	1	16	6	43	Enteritis	.68	1.71	.59	.18	.50	.64	1.58	1.75	.46
...	...	...	...	...	...	1	...	1	Fistula	.02	...	.04	...	...	...	...	...	...
...	2	1	1	12	...	15	3	34	Gastritis	.54	.85	.57	...	.67	.32	.78	.58	...
1	...	..	1	6	1	4	...	13	Hernia	.21	...	.15	.18	.34	.32	...	...	.46
1	2	...	...	6	1	5	...	15	Ileus	.23	...	.19	.18	.34	...	...	.58	.46

1	2	..	3	24	8	27	1	66	Peritonitis..................	1.04	.29	1.02	1.45	1.34	.96	......	.58	.46
....	....	...	...	......	..	1	1	2	Stricture of Intestines..........	.03	.29	.04	......	......	......	.....	......	......
....	....	...	1	......	1	3	....	5	Ulceration of Intestines........	.08	.....	.11	.18	.....	.32	.....	......	.....
....	3	1	...	10	5	13	2	34	*Stomach Diseases*	.54	.57	.50	.90	.56	......	.78	.88	......
....	..	...	1	1	3	4	....	9	Hepatitis....................	.13	.....	.15	.54	.06	.32	......	.....	......
....	...	....	....	6	....	4	2	12	Jaundice	.18	.57	.15	......	.34	......	......	......	.....
3	5	...	2	13	8	31	3	65	Liver Diseases	1 03	.85	1.18	1.45	.71	.64	.....	1.46	1.38
....	...	...	...	......	....	1	....	1	Spleen Diseases...............	.02	......	.04	......	.....	......	......	......	.....
....	2	...	...	2	1	1	1	7	Bowel Diseases	.11	.29	.04	.18	.11	......	......	.58	......
									Order Five.—Diseases of the Urinary Organs.									
....	....	1	1	6	2	25	2	37	Nephritis	.57	.57	.95	.36	.34	.32	.78	......	... ..
3	4	3	8	25	5	42	3	93	Nephria (Bright's Disease)......	1.46	.85	1.62	.90	1.38	2 55	2.34	1.17	1 38
2	...	1	1	8	1	6	3	22	Diabetes.....................	.35	.85	.23	.18	.45	.32	.78	......	.92
....	...	...	....	......	...	1	....	1	Calculus (Gravel, etc.)	.02	.....	.04	.....	.....	......	......	......	.....
....	1	1	...	9	1	4	1	17	Cystitis......................	.27	.29	.15	.18	.50	.....	.78	.29	.....
....	....	....	....	1	....	6	...	7	Prostate, Disease of	.11	......	.23	......	.06	......	......	......	......
2	2	...	3	4	1	25	2	39	Kidney Diseases.............	.63	.57	.95	.18	.22	.96	......	.58	.92
....	....	....	...	1	1	2	....	4	Bladder, Diseases of...........	.06	......	.07	.18	.06	.....	......	......	......
									Order Six.—Diseases of the Generative Organs. Female.									
1	....	....	...	......	...	4	...	5	Ovarian Dropsy...............	.08	.....	.15	......	... ..	......	......	......	.46
...	....	...	....	2	4	7	....	13	Diseases of Uterus	.22	.....	.27	.72	.11	......	......	.....	......
									Order Seven.—Osseous and Locomotory System.									
....	...	....	....	2	...	2	...	4	Bones, Diseases of	.06	... ..	.07	......	.11	.....	.....	.....	.....
....	...	..	...	......	...	2	....	2	Joints, Diseases of	.03	......	.07	......	.... .	.....	......	......	......
...	1	...	2	4	2	10	....	19	Vertebræ, Disease of..........	.31	......	.39	.36	.22	.64	......	.29	.....
									Order Eight.—Integumentary System.									
....	1	..	....	10	...	5	....	16	Phlegmon	.25	......	.19	......	.56	......	......	.29	.....
....	..	...	....	1	...	....	...	1	Ulcer.	.02	......	.....	......	.06	.....	......	......	.....
....	....	....	1	1	...	2	....	4	Skin Diseases	.06	......	.07	......	.06	.32	.. ...	......	......

TABLE IX.—CLASSIFICATION AND PERCENTAGE, 1887.—Continued.

NUMBER OF DEATHS IN EACH DIVISION OF THE STATE.											PERCENTAGE OF DEATHS IN EACH DIVISION.							
Bristol County.	Kent County.	Newport County Towns.	Newport City.	Providence County Towns.	Pawtucket City.	Providence City.	Washington County.	Whole State.	CAUSES OF DEATH.	Percentage in the Whole State.	Washington County.	Providence City.	Pawtucket City.	Providence County Towns.	Newport City.	Newport County Towns.	Kent County.	Bristol County.
									CLASS IV.—DEVELOPMENTAL.									
									Order One. — Developmental Diseases of Children.									
3	5	9	6	69	8	15	4	119	Debility, Infantile	1 88	1.13	.57	1.45	3.84	1.92	7.03	1.46	1.38
1	5	...	6	24	15	38	3	92	Debility, Premature Birth	1.45	.85	1.44	2.71	1.34	1.91	.....	1.46	.46
....	....	....	....	5	1	4	....	10	Cyanosis	.16	.....	.15	.18	.28	......	.17	.29	.46
1	1	....	....	3	3	9	1	18	Malformations	.27	.29	.34	... ..	.54	.....	......	.58	.29
2	2	....	....	10	...	9	1	24	Teething	.38	.29	.34	......	.56	......	......	.58	.92
3	3	2	5	19	10	39	1	82	Innutrition	1.30	.29	1.48	1.81	1.06	1.60	1.56	.88	1.38
									Order Two. — Developmental Diseases of Women.									
....	5	....	1	9	3	14	...	32	Child Birth	.50	......	.55	.54	.50	.32	......	1.46	.....
...	..	....	....	... ...	1	......	....	1	Paramenia	.02	.....	......	.18	......	......	......	......	......
									Order Three.—Developmental Diseases of Old People.									
17	19	12	17	64	45	76	28	278	Old Age	4.38	7.97	2.89	8.14	3 56	5.43	9.38	5.53	7.84
									Order Four.— Diseases of Nutrition. Adolescent and Adult.									
....	1	..	3	8	....	5	1	18	Atrophy	.27	.29	.19	......	.45	.96	.....	.29	... ..
....	...	2	6	34	15	15	2	74	Debility	1.18	.57	.57	2.71	1 89	1.91	1.56	......	......

									CLASS V.—VIOLENCE AND OTHERWISE.									
									Order One.—Accident and Negligence.									
....	....	....	2	1	2	18	....	23	Fractures and Contusions.......	.36	......	.68	.36	.06	.64	......	......	......
....	2	....	2	4	1	7	1	17	Burns and Scalds	.27	.29	.27	.18	.22	.64	......	.58	.....
1	2	4	4	15	3	5	5	39	Drowning	.62	1.42	.19	.54	.84	1.28	3.13	.58	.46
....	.. .	....	2	4	2	7	2	17	Falls.........................	.27	.57	.27	.36	.22	.64	.....	......	......
....	1	...	....	1	1	4	...	7	Poisou	.11	......	.15	.18	.06	......	......	.29	.....
2	1	. .	1	4	2	10	4	24	Railroad.......................	.38	1.14	.38	.36	.22	.32	......	.29	.93
1	1	...	...	9	...	2	1	14	Suffocation....................	.22	.29	.07	......	.50	......	......	.29	.46
1	4	3	5	23	9	18	2	65	Various	1.02	.57	.68	1.54	1.28	1.60	2.34	1.18	.46
....	....	....	....	......	...	2	...	2	*Order Two.—Homicide.*	.03	......	.07	......	.....	......	......	.....	......
2	....	....	2	5	....	7	...	16	*Order Three.—Suicide.*	.25	......	.27	......	.28	.64	......	......	.92
									Order Four.—Various.									
1	2	2	....	13	2	4	3	27	Unclassified..........	.41	.85	.15	.36	.72	......	1.56	.59	.46
....	....	2	4	......	3	10	....	19	Cause not Specified	.31	.....	.38	.54	.. ...	1.28	1.57	......	......

TABLE X.—OCCUPATIONS AND AGES AT DEATH, 1887.

Showing the Number, the Aggregate and the Average Ages at Death of the Decedents in the several Occupations, Ages under Twenty being excluded.

OCCUPATIONS.	STATE OF RHODE ISLAND.		
	Number of Deaths.	Aggregate Ages.	Average Age.
TILLERS OF THE SOIL.			
Farmers and Farm Laborers	160	10,811	67.56
Florists	2	107	53.50
Gardeners	6	372	62.00
	168	11,290	67.02
II.			
PROFESSIONAL.			
Actors	1	48	48.00
Architects	1	32	32.00
Chemists	1	61	61.00
Civil Engineers	3	161	57.00
Clergymen	13	808	62.15
Dentists	2	117	58.50
Designers	1	62	62.00
Draughtsmen	1	67	67.00
Journalists	2	90	45.00
Judges and Justices	1	43	43.00
Lawyers	11	637	57.91
Musicians	2	81	40.50
Nurses	1	82	82.00
Physicians	11	697	63.36
Policemen	2	98	49.00
Public Officers	4	260	65.00
Sculptors	1	53	53.00
Stenographers	1	29	29.00
Students	3	68	22.67
Teachers	6	300	50.00
	68	3,794	55.79
III.			
OPTIONAL ACTIVITY.			
Agents	5	193	38.60
Auctioneers	1	69	69.00
Bankers and Brokers	5	343	68.60

TABLE X.—OCCUPATIONS, 1887.—Continued.

OCCUPATIONS.	STATE OF RHODE ISLAND.		
	Number of Deaths.	Aggregate Ages.	Average Age.
Bank Officers	4	243	60.75
Contractors and Builders	5	289	57.80
Druggists	3	122	40.67
Gentlemen of Leisure	1	71	71.00
Grocers	22	1,189	54.05
Hotel Keepers	6	308	51.33
Liquor Dealers	1	61	61.00
Manufacturers	25	1,571	62.84
Marketmen	2	53	26.50
Merchants	26	1,648	63.38
Railroad Officials	8	453	56.62
Saloon Keepers	3	167	55.67
Stable Keepers	3	192	64.00
Traders, Dealers, etc	35	2,021	57.74
Tobacconists	1	43	43.00
Undertakers	1	83	83.00
	157	9,119	58.08
IV.			
OUTDOOR.—*Local.*			
Boat Builders	2	127	63.50
Carpenters and Joiners	51	3,128	61.33
Masons	28	1,660	59.39
Riggers	1	87	87.00
Sash and Blind Makers	1	62	62.00
Ship Carpenters	1	77	77.00
Stonecutters and Marble Workers	9	473	52.56
Tanners and Curriers	1	53	53.00
Wheelwrights	7	377	53.86
	101	6,044	58.84
V.			
INDOOR.—*Active.*			
Bakers	4	242	60.50
Blacksmiths	21	1,114	53.05
Bleachers	1	27	27.00
Block Makers	1	39	39.00

TABLE X.—OCCUPATIONS, 1887.—Continued.

OCCUPATIONS.	STATE OF RHODE ISLAND.		
	Number of Deaths.	Aggregate Ages.	Average Age.
Boiler Makers	1	67	67.00
Brewers	1	42	42.00
Cabinet Makers	2	147	73.50
Calico Printers	1	75	75.00
Carriage Makers	1	72	72.00
Confectioners	4	271	67.75
Cooks	3	151	50.33
Coopers	4	285	71.25
Dyers	6	320	53.33
Foundrymen	2	145	72.50
Gas Fitters, etc	1	32	32.00
Gold Refiners	1	60	60.00
Lathers	1	29	29.00
Locksmiths	1	72	72.00
Machinists	47	2,334	49.64
Mechanics	8	412	51.50
Moulders	9	441	49.00
Painters and Glaziers	30	1,485	49.50
Paper Hangers	1	56	56.00
Pattern Makers	4	249	62.25
Picker Makers	2	89	49.50
Plasterers and Stucco Workers	1	66	66.00
Plumbers	6	247	41.23
Spindle Makers	2	123	61.50
Superintendents and Overseers	11	602	54.72
Tinsmiths	4	182	45.50
Tool Makers	1	47	47.00
Upholsterers	3	166	55.33
Wood Finishers	1	42	42.00
Wood Turners	3	130	43.33
	189	9,861	52.12
VI.			
INDOOR.—*Activity Restricted.*			
Barbers	10	337	33.70
Bookbinders	2	109	54.50
Bookkeepers	14	777	55.50
Cigar Makers	2	25	47.50
Clerks and Salesmen	60	2,156	35.93

TABLE X.—OCCUPATIONS, 1887.—Continued.

OCCUPATIONS.	STATE OF RHODE ISLAND.		
	Number of Deaths.	Aggregate Ages.	Average Age.
Enamelers	1	64	64.00
Engravers	5	192	38.40
File Cutters	3	139	46.33
Harness Makers	4	210	52.50
Jewelers	30	1,371	45.70
Laundrymen	1	33	33.00
Millers	1	57	57.00
Operatives	76	3,328	43.64
Paper Makers	1	80	80.00
Polishers	1	60	60.00
Printers	5	207	41.40
Roll Coverers	1	54	54.00
Rope Makers	1	82	82.00
Rubber Workers	6	279	46.50
Sail Makers	1	72	72.00
Shoemakers	18	1,087	69.39
Silversmiths	5	278	55.60
Tailors	10	570	57.00
Telegraphers	1	40	40.00
Watch Makers	3	132	44.00
Wool Sorters	5	208	41.60
	267	12,017	45.01
VII.			
OCCUPATIONS AT LARGE.—*Active.*			
Brakemen	3	93	31.00
Butchers	8	443	55.88
Car Drivers	1	27	27.00
Coachmen	9	425	47.22
Engineers and Firemen	15	683	45.53
Expressmen	6	333	55.50
Fire Company Members	1	31	31.00
Fishermen and Oystermen	8	415	51.88
Naval Officers	2	124	62.00
Peddlers	6	322	53.67
Sailors	18	798	44.33
Sea Captains	5	345	69.00
Teamsters	16	606	37.88
	98	4,645	47.40

TABLE X.—OCCUPATIONS, 1887.—Continued.

OCCUPATIONS.	STATE OF RHODE ISLAND.		
	Number of Deaths.	Aggregate Ages.	Average Age.
VIII.			
NO SPECIAL TRADES.			
Hackmen, etc	4	189	47.25
Hostlers	2	79	39.50
Janitors	5	282	56.40
Laborers	296	15,348	51.86
Lamplighters	2	106	53.00
Lighthouse Keepers	1	43	43.00
Servants	2	78	39.00
Stewards	1	34	34.00
Watchmen	6	374	62.33
	319	16,533	51.82
IX.			
WOMEN.			
Box Makers	1	57	57.00
Chain Makers	1	33	33.00
Clerks	3	118	39.33
Cooks	2	97	48.50
Domestics	11	488	44.36
Dressmakers	12	445	37.08
Housekeepers	201	11,652	57.96
Laundresses	1	40	40.00
Milliners	1	40	40.00
Nurses	2	124	62.00
Operatives	50	1,571	31.42
Physicians	1	74	74.00
Rubber Workers	1	21	21.00
Seamstresses	3	213	71.00
Tailoresses	2	81	45.50
Teachers	4	133	33.25
Telegraphers	1	54	54.00
Trader and Dealer	1	57	57.00
	298	15,298	57.35

TABLE X.—RECAPITULATION BY CLASSES.

OCCUPATIONS.	STATE OF RHODE ISLAND.		
	Number of Deaths.	Aggregate Ages.	Average Age.
I. TILLERS OF THE SOIL	168	11,290	67.20
II. PROFESSIONAL SERVICES	68	3,794	55.79
III. AGENTS, FINANCIERS, TRADERS, ETC.	157	9,119	58.08
IV. OUTDOOR.—*Localized*	101	6,044	58.84
V. INDOOR—*Active*	189	9,861	52.12
VI. INDOOR—*Activity Restricted*	267	12.017	45.01
VII. OCCUPATIONS AT LARGE—*Active*	98	4,645	47.40
VIII. NO SPECIAL TRADES	319	16,533	51.82
IX. WOMEN	298	15,298	51.35
ALL CLASSES	1,665	88,601	53.21

TABLE XI.—OCCUPATIONS AND CAUSES OF DEATH, 1887.

Ages under twenty being excluded.

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder, Diseases of.	Brain, Diseases of.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhœa and Dysentery.	Enteritis.	Erysipelas.	Fevers, Malarial.	Fevers, Typhoid, etc.	Heart, Diseases of.	Insanity.	Kidney, Diseases of.	Liver, Diseases of.	Old Age.	Pneumonia.	Rheumatism.	Scrofula.	Spine, Diseases of.	Stomach, Diseases of.	Suicide.
I. TILLERS OF THE SOIL.																												
Farmers and Farm Laborers	149	5	..	16	4	3	5	3	7	13	5	1	5	2	3	2	7	22	..	4	1	23	14	1	..	..	2	1
Florists	2	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
Gardeners	5	..	1	..	..	..	..	..	..	1	..	..	1	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..
	156	5	1	16	4	3	5	3	7	14	6	1	6	2	4	3	7	23	..	4	1	23	14	1	..	..	2	1
II. PROFESSIONAL.																												
Actors	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Architects	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chemists	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Civil Engineers	3	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..
Clergymen	11	..	..	..	..	..	..	..	1	2	..	..	1	..	..	..	..	..	1	..	2	1	3	..	..	..	..	..
Dentists	2	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder, Diseases of.	Brain, Diseases of.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhœa and Dysentery.	Enteritis.	Erysipelas.	Fevers, Malarial.	Fevers, Typhoid, etc.	Heart, Diseases of.	Insanity.	Kidney, Diseases of.	Liver, Diseases of.	Old Age.	Pneumonia.	Rheumatism.	Scrofula.	Spine, Diseases of.	Stomach, Diseases of.	Suicide.
Designers	1	..	..	..	..	..	.	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Draughtsmen	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Journalists	2	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Judges and Justices	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Lawyers	10	..	..	2	..	..	2	..	..	..	..	..	2	..	..	..	..	3	..	1	..	..	..	..	..	..	..	..
Lighthouse Keepers	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
Musicians	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
Nurses	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
Physicians	11	1	1	..	..	..	1	..	1	2	..	..	1	..	..	..	..	2	..	..	..	2	..	..	..	..	..	..
Policemen	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Public Officers	4	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..
Sculptors	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Stenographers	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Students	3	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..
Teachers	5	..	..	..	..	..	..	1	..	2	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..
	64	1	1	7	..	..	3	2	2	14	1	..	4	..	..	..	2	12	1	3	2	4	5	..	..	..	..	..
III. OPTIONAL ACTIVITY.																												
Agents	4	..	..	..	..	..	..	..	..	2	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Auctioneers	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..

TABLE XI.—OCCUPATIONS AND CAUSES OF DEATH, 1887.—Continued.

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder, Diseases of	Brain, Diseases of.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhœa and Dysentery.	Enteritis.	Erysipelas.	Fevers, Malarial.	Fevers, Typhoid, etc.	Heart, Diseases of.	Insanity.	Kidney, Diseases of.	Liver, Diseases of.	Old Age.	Pneumonia.	Rheumatism.	Scrofula.	Spine, Diseases of.	Stomach, Diseases of.	Suicide.
Bankers and Brokers	3	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..
Bank Officers	5	1	..	1	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Contractors and Builders	4	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..
Druggists	2	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
Gentlemen of Leisure	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Grocers	21	1	..	4	..	..	..	..	1	3	1	..	1	..	..	2	1	1	..	..	..	1	4	..	..	..	..	..
Hotel Keepers	6	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	..	2	..	..	..	1	..	..	..	..	..	..
Liquor Dealers	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Manufacturers	24	..	..	3	..	..	2	..	3	2	1	1	..	..	1	1	1	2	..	5	1	1	..	..	..	..	..	..
Marketmen	2	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Merchants	21	..	..	5	..	..	..	..	1	..	..	..	..	..	..	..	1	4	..	5	..	..	4	..	..	..	1	..
Railroad Officials	7	..	..	1	..	..	1	2	..	..	..	..	..	..	..	..	..	..	1	..	..	..	2	..	..	..	..	..
Saloon Keepers	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1
Stable Keepers	3	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
Traders, Dealers, etc	32	2	..	5	1	..	1	..	1	1	..	..	..	1	..	1	..	3	1	3	4	2	5	..	..	..	1	..
Tobacconists	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
Undertakers	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
	143	4	..	20	1	1	7	2	7	13	4	1	2	1	1	5	3	14	3	18	6	7	18	1	..	..	2	1

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder, Diseases of.	Brain, Diseases of.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhœa and Dysentery.	Enteritis.	Erysipelas.	Fevers, Malarial.	Fevers, Typhoid, etc.	Heart, Diseases of.	Insanity.	Kidney, Kiseases of.	Liver, Diseases of.	Old Age.	Pneumonia.	Rheumatism.	Scrofula.	Spine, Diseases of.	Stomach, Diseases of.	Suicide.
IV. OUTDOOR.—*Local.*																												
Boat Builders	2	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
Carpenters and Joiners	50	4	2	2	..	..	1	2	4	10	..	..	2	1	..	..	2	2	..	4	..	5	7	2	..	..	..	..
Masons	26	2	..	3	..	..	..	2	1	..	1	..	..	1	..	2	1	2	..	3	1	1	5	..	..	..	1	..
Riggers	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
Sash and Blind Makers	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ship Carpenters	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
Stonecutters and Marble Workers	9	..	..	..	..	..	1	..	..	1	..	..	.	1	..	..	1	..	1	..	..	1	1	..	1	..	1	..
Tanners and Curriers	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wheelwrights	7	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1	..	1	1	..	..	..	..	1
	98	7	2	6	..	..	2	5	5	13	1	..	2	3	..	2	4	6	1	8	1	9	15	2	1	..	2	1
V. INDOOR.—*Active.*																												
Bakers	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..
Blacksmiths	20	2	..	2	..	..	1	..	..	7	..	..	..	..	..	1	..	3	..	1	..	..	3	..	..	..	..	..

TABLE XI.—OCCUPATIONS AND CAUSES OF DEATH, 1887.—Continued.

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder, Diseases of.	Brain, Diseases of.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhœa and Dysentery.	Enteritis.	Erysipelas.	Fevers, Malarial.	Fevers, Typhoid, etc.	Heart, Diseases of.	Insanity.	Kidney, Diseases of.	Liver, Diseases of.	Old Age.	Pneumonia.	Rheumatism.	Scrofula.	Spine, Diseases of.	Stomach, Diseases of.	Suicide.
Bleachers	.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Block Makers	.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Boiler Makers	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
Brewers	2	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
Cabinet Makers	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..
Calico Printers	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
Carriage Makers	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Confectioners	4	..	..	..	..	..	..	1	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cooks	3	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..
Coopers	3	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..
Dyers	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
Foundrymen	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
Gas Fitters, etc	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
Gold Refiners	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lathers	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
Locksmiths	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Machinists	42	4	..	1	..	..	..	1	1	8	1	1	..	..	1	..	2	5	..	3	..	3	5	1	2	..	1	1
Mechanics	5	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..
Moulders	9	1	..	..	..	..	..	1	..	3	..	..	..	..	..	..	1	1	..	..	..	..	1	..	..	..	..	1

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder, Diseases of.	Brain, Diseases of.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhœa and Dysentery.	Enteritis.	Erysipelas.	Fevers, Malarial.	Fevers, Typhoid, etc.	Heart, Diseases of.	Insanity.	Kidney, Diseases of.	Liver, Diseases of.	Old Age.	Pneumonia.	Rheumatism.	Scrofula.	Spine, Diseases of.	Stomach, Diseases of.	Suicide.
Painters and Glaziers	28	3	..	5	..	1	1	..	1	3	..	..	2	1	..	..	..	4	..	1	..	1	4	..	..	1	..	..
Paper Hangers	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
Pattern Makers	3	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..
Picker Makers	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Plasterers and Stucco Workers	2	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
Plumbers	3	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
Spindle Makers	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
Superintendents and Overseers	10	2	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	1	..	2	..	..	..
Tinsmiths	4	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
Tool Makers	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Upholsterers	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..
Wood Turners	3	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
	164	16	1	14	1	3	2	3	3	30	2	1	5	1	1	1	5	22	..	10	2	7	23	1	4	1	3	2
VI. INDOOR.—*Activity Restricted.*																												
Barbers	11	..	1	2	..	..	1	1	..	2	..	..	1	..	..	..	1	..	..	..	..	..	2	..	..	..	..	..
Bookbinders	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..

TABLE XI.—OCCUPATIONS AND CAUSES OF DEATH, 1887.—Continued.

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder, Diseases of.	Brain, Diseases of.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhœa and Dysentery.	Enteritis.	Erysipelas.	Fevers, Malarial.	Fevers, Typhoid, etc.	Heart, Diseases of.	Insanity.	Kidney, Diseases of.	Liver, Diseases of.	Old Age.	Pneumonia.	Rheumatism.	Scrofula.	Spine, Diseases of.	Stomach, Diseases of.	Suicide.
Bookkeepers	14	3	..	..	..	..	1	..	1	1	2	..	..	..	..	..	..	1	..	1	1	..	3	..	..	..	..	..
Cigar Makers	2	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Clerks and Salesmen	59	3	1	2	..	..	..	1	1	15	..	2	..	2	1	1	4	5	..	5	..	..	10	1	2	1	..	2
Enamelers	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Engravers	5	..	..	1	..	..	..	1	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
File Cutters	3	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..
Harness Makers and Saddlers	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	1	..	..	1	..	..	..	..	..
Jewelers	30	2	..	3	..	1	..	..	..	8	..	1	..	..	1	..	2	5	..	1	2	1	2	..	..	1	..	..
Laundrymen	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
Millers	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Operatives	67	1	2	4	2	..	2	2	2	17	1	..	2	1	1	2	2	5	1	4	2	3	7	..	1	..	2	1
Paper Makers	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
Polishers	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Printers	6	2	..	1	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Roll Coverers	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Rope Makers	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
Rubber Workers	6	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	..
Sail Makers	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Shoemakers	17	..	..	6	..	..	..	..	..	3	1	..	1	..	..	..	..	1	..	1	1	1	1	..	..	..	1	..

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder, Diseases of.	Brain, Diseases of.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhœa and Dysentery.	Enteritis.	Erysipelas.	Fevers, Malarial.	Fevers, Typhoid, etc.	Heart, Diseases of.	Insanity.	Kidney, Diseases of.	Liver, Diseases of.	Old Age.	Pneumonia.	Rheumatism.	Scrofula.	Spine, Diseases of.	Stomach, Diseases of.	Suicide.
Silversmiths	4	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..
Tailors	10	1	..	1	..	1	..	..	1	3	..	..	..	..	..	..	..	2	..	..	1	..	..	..	..	..	..	..
Watch Makers	3	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..
Wool Sorters	5	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1	..	1	..	..	..	..	..	..
	256	13	5	21	2	2	4	6	7	58	4	4	4	5	3	3	10	24	2	20	8	7	30	2	3	2	4	3
VII. OCCUPATIONS AT LARGE.—*Active.*																												
Brakemen	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Butchers	7	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	2	..	1	..	..	..	..	..	..	..	1
Car Drivers	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Coachmen	9	1	..	1	..	..	..	1	1	..	1	..	..	..	..	..	..	..	1	1	..	..	2	..	..	..	..	..
Engineers and Firemen	15	2	..	..	1	..	..	1	..	4	..	..	..	..	..	..	..	..	..	1	2	..	4	..	..	..	..	..
Expressmen	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Fire Company Members	5	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1	..	..	1	..	..	..	..	..
Fishermen and Oystermen	8	2	..	..	..	..	..	..	..	2	..	1	..	..	..	..	1	1	..	..	..	1	..	..	..	..	..	..
Naval Officers	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
Peddlers	6	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	3	..	..	..	..	1	..	..	..	..	..

TABLE XI.—OCCUPATIONS AND CAUSES OF DEATH, 1887.—Continued.

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder, Diseases of	Brain, Diseases of.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhœa and Dysentery.	Enteritis.	Erysipelas.	Fevers, Malarial.	Fevers, Typhoid, etc.	Heart, Diseases of.	Insanity.	Kidney, Diseases of.	Liver, Diseases of.	Old Age.	Pneumonia.	Rheumatism.	Scrofula.	Spine, Diseases of.	Stomach, Diseases of.	Suicide.
Sailors	18	1	..	..	..	..	2	1	..	..	..	..	..	1	1	1	1	3	..	1	2	..	2	..	2	..	..	..
Sea Captains	5	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	1
Teamsters	14	1	..	1	..	..	..	..	..	2	..	..	..	..	..	1	1	2	..	..	..	..	5	..	1	..	..	..
	94	12	..	4	2	..	2	4	1	11	1	1	..	2	3	2	3	14	1	5	4	2	15	..	3	..	..	2
VIII. NO SPECIAL TRADES.																												
Hackmen, etc	4	1	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hostlers	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
Janitors	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	1	..	..	1	..	..	..	..	..
Laborers	273	26	4	16	4	1	5	10	6	60	13	1	8	7	3	9	6	19	..	10	6	18	33	..	2	..	4	2
Lamplighters	2	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
Servants	2	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
Stewards	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Watchmen	6	1	..	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	2	..	..	..	..	..
	293	29	4	19	4	1	6	10	7	62	13	1	8	7	3	10	7	23	..	11	6	18	36	..	2	..	4	2

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis	Asthma.	Bladder, Diseases of.	Brain, Diseases of.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhœa and Dysentery.	Enteritis.	Erysipelas.	Fevers, Malarial.	Fevers, Typhoid, etc.	Heart, Diseases of.	Insanity.	Kidney, Diseases of.	Liver, Diseases of.	Old Age.	Pneumonia.	Rheumatism.	Scrofula.	Spine, Diseases of.	Stomach, Diseases of.	Suicide.
IX.—WOMEN.																												
Box Makers	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chain Makers	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
Clerks	3	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
Cooks	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Domestics	10	1	..	1	..	..	..	..	..	2	..	..	1	..	..	..	..	..	..	..	..	1	2	1	..	1	..	..
Dressmakers	10	1	..	..	..	..	..	..	1	4	..	..	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	1
Housekeepers	181	1	..	13	1	..	4	7	6	36	6	1	1	4	2	5	3	21	..	6	6	30	19	3	2	..	4	..
Laundresses	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Milliners	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nurses	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
Operatives	45	1	..	..	..	..	..	3	..	26	2	..	2	..	1	..	1	2	1	2	..	1	1	..	2	..	..	..
Physicians	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rubber Workers	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Seamstresses	3	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..
Tailoresses	2	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Teachers	3	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Telegraph Operators	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
	268	4	..	18	1	..	4	10	9	76	8	1	5	5	3	5	4	26	2	10	6	33	24	4	4	1	4	1

TABLE XI Continued.—OCCUPATIONS AND CAUSES OF DEATH.—RECAPITULATION BY CLASSES.

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder, Diseases of.	Brain, Diseases of.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhœa and Dysentery.	Enteritis.	Erysipelas.	Fevers, Malarial.	Fevers, Typhoid, etc.	Heart, Diseases of.	Insanity.	Kidney, Diseases of.	Liver, Diseases of.	Old Age.	Pneumonia.	Rheumatism.	Scrofula.	Spine, Diseases of.	Stomach, Diseases of.	Suicide.
I. TILLERS OF THE SOIL	156	5	1	16	4	3	5	3	7	14	6	1	6	2	4	3	7	23	..	4	1	23	14	1	..	..	2	1
II. PROFESSIONAL SERVICES	64	1	1	7	..	..	3	2	2	14	1	..	4	..	..	..	2	12	1	3	2	4	5	..	..	..	..	..
III. AGENTS, FINANCIERS, TRADERS, ETC.	142	4	..	20	1	1	7	2	7	13	4	1	2	1	1	5	3	14	3	18	6	7	18	1	..	..	2	1
IV. OUTDOOR.—*Localized.*	98	7	2	6	..	..	2	5	5	13	1	..	2	3	..	2	4	6	1	8	1	9	15	2	1	..	2	1
V. INDOOR—*Active.*	164	16	1	14	1	3	2	3	3	30	2	1	5	1	1	1	5	22	..	10	2	7	23	1	4	1	3	2

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder, Diseases of.	Brain, Diseases of.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhœa and Dysentery.	Enteritis.	Erysipelas.	Fevers, Malarial.	Fevers, Typhoid, etc.	Heart, Diseases of.	Insanity.	Kidney, Diseases of.	Liver, Diseases of.	Old Age.	Pneumonia.	Rheumatism.	Scrofula.	Spine, Diseases of.	Stomach, Diseases of.	Suicide.
VI. INDOOR—*Activity Restricted*	256	13	5	21	2	2	4	6	7	58	4	4	4	5	3	3	10	24	2	20	8	7	30	2	3	2	4	3
VII. OCCUPATIONS AT LARGE—*Active*	94	12	..	4	2	..	2	4	1	77	1	1	..	2	3	2	3	14	1	5	4	2	15	..	3	..	..	2
VIII. NO SPECIAL TRADES..................	293	29	4	19	4	1	6	10	7	62	13	1	8	7	3	10	7	23	..	11	6	18	36	..	2	..	4	2
IX. WOMEN..............................	268	4	..	18	1	..	4	10	9	76	8	1	5	5	3	5	4	26	2	10	6	33	24	4	4	1	4	1
ALL CLASSES	1,535	91	14	125	15	10	35	45	48	297	40	10	36	26	18	31	45	164	10	89	36	110	180	11	17	4	21	13

Occupations, with Causes of Death not included in Table XI.

Agent	Epilepsy.
Baker	Epilepsy.
Butcher	Pleurisy.
Bleacher	Peritonitis.
Blacksmith	Dropsy.
Clergyman	Œdema of Lungs.
“	Enlarged Prostate.
Coal Dealer	Dropsy.
Clerk	Syphilis.
Carpenter	Enlarged Prostate.
Contractor and Builder	Peritonitis.
Cooper	Hernia.
Druggist	Pleurisy.
Dyer	Enlarged Prostate.
“	Hernia.
“	Epilepsy.
“	Septicæmia.
Expressman	Dropsy.
Express business	Ulceration of Bowels.
Farmer	Senile Gangrene.
“	Hernia.
“	Enlarged Prostate.
“	Stricture of Œsophagus.
“	Septicæmia.
“	Diphtheria.
Farmers (2)	Pleurisy.
“ (3)	Dropsy.
Foundryman	Fistula.
Gardener	Disease of Lungs.
Grocer	Necrosis of Femur.
Hostler	Peritonitis.
Janitor	Homicide.
Laborer	Stricture of Œsophagus.
“	Tetanus.
“	Enlarged Prostate.
“	Ulceration of Bowels.
“	Syphilis.
“	Obstipation.
“	Dropsy.
“	Measles.
Laborers (6)	Peritonitis.
“ (2)	Disease of Bowels.
Lawyer	Œdema of Lungs.
Merchant	Epilepsy.
“	Stricture of Urethra.
“	Septicæmia.
“	Skin Diseases.
“	Prog. Musc. Atrophy.
Machinist	Hemorrhage.
“	Septicæmia.
Machinist	Hernia.
Mechanic	Hemorrhage.
“	Pleurisy.
“	Leucocythemia.
Mason	Dropsy.
“	Syphilis.
Manufacturer	Colic.
Operative,	Diphtheria.
“	Obstipation.
“	Tonsillitis.
“	Convulsions.
Operatives (2)	Dropsy.
“ (3)	Peritonitis.
Overseer	Diphtheria.
Police Officer (detective)	Peritonitis.
Plumber	Ulceration of Intestines.
Painters (2)	Peritonitis.
Pattern Maker	Enlarged Prostate.
Railroad Official	Peritonitis.
Silversmith	Disease of Lungs.
Shoemaker	Enlarged Prostate.
Teamsters (2)	Septicæmia.
Teacher	Hemorrhage.
Trader and Dealer	Gangrene of Foot.
“ “ “	Peritonitis.
Telegrapher	Neuralgia.
Wood Finisher	Hernia.

WOMEN.

Clerk	Ulceration of Bowels.
Dressmaker	Puerperal Fever.
“	Dropsy.
Domestic	Peritonitis.
Housekeeper	Puerperal Fever.
“	Uterine Disease.
“	Pleurisy.
“	Septicæmia.
Housekeepers (3)	Child Birth.
“ (2)	Peritonitis.
“ (5)	Dropsy.
“ (3)	Obstipation.
“ (2)	Tumors of Uterus.
Operative	Abortion.
“	Dropsy.
“	Hemorrhage.
Operatives (2)	Peritonitis, Acute.
Trader and Dealer	Ovarian Tumor.

RESULTS AND OBSERVATIONS.

The number of births registered in the State of Rhode Island during the year 1887 was seven thousand six hundred and sixty-eight (7,668); the number of marriages, two thousand eight hundred and thirty-nine (2,839); and the number of deaths, six thousand three hundred and forty (6,340).

TABLE XII.

Presenting the General Results of Registration in the State during ten years, 1854–1863, and during each of the last twenty-four years.

Ten Years,	Whole Number of Births.	Still-born.	Living Births.	Marriages.	Deaths.
1854–1863	38,042	1,471	36,571	14,943	24,230
1864	3,892	138	3,754	1,844	3,360
1865	3,955	177	3,778	1,896	3,405
1866	4,902	172	4,730	2,318	2.970
1867	5,127	163	4,964	2,344	2,889
1868	5,372	212	5,160	2,285	2,912
1869	5,245	220	5,025	2,289	3,382
1870	5,215	234	4,981	2,362	3,238
1871	5,678	223	5,455	2,336	3,344
1872	6,143	202	5,941	2,537	4,247
1873	6,022	228	5,794	2,630	4,403
1874	6,466	277	6,189	2,541	4,229
1875	6,508	246	6,262	2,485	4,317
1876	6,329	224	6,105	2,253	4,116
1877	6,235	242	5,993	2,282	4,450
1878	6,714	248	6,466	2,324	4,441
1879	6,350	216	6,134	2,396	4,472
1880	6,295	192	6,103	2,769	4,829
1881	6,761	264	6,497	2,750	5,016
1882	6,825	253	6,572	2,634	5,074
1883	7,046	253	6,793	2,611	5,282
1884	7,305	272	7,033	2,558	5,141
1885	7,028	271	6,757	2,488	5,389
1886	7,621	293	7,328	2,750	5,849
1887	7,668	276	7,392	2,839	6,340

During the period of thirty-four years there were recorded, in Rhode Island, 184,744 births, of which number 7,392 were still-born, and 177,777 were living children.

During the same period there were recorded 73,463 marriages, or 146,926 persons married, and 127,325 deaths.

These results show that in every 25.1 births there was one still-born child, or that in every 1,000 births there were about 40 still-born and 960 living children.

The same results also show that the ratio of whole number of living births to the whole number of persons married, and to the whole number of decedents, each during the same period, were as follows:

	Persons married.		Deaths.
For every 100 living births there were....................	82.6	and.........................	71.6

The increase in the number of births during 1887, as compared with the preceding year, was quite small, 47 only; the increase during 1886 was 593; the number of marriages was 89 larger than in the preceding year, as against an increase of 262 during 1886 over the year 1885; the increase in the number of deaths over the preceding year was 491, a larger increase than recorded in any one year over the preceding, during the whole period of registration in Rhode Island.

TABLE XIII.

Comparative exhibit of Births, Marriages and Deaths in each town in Rhode Island, in each of the five years, 1883—1887, and excess of Births over the Deaths in 1887.

TOWNS AND DIVISIONS OF THE STATE.	BIRTHS.					MARRIAGES.					DEATHS.					Excess of births over deaths, 1887.
	1883.	1884.	1885.	1886.	1887.	1883.	1884.	1885.	1886.	1887.	1883.	1884.	1885.	1886.	1887.	
Barrington	21	20	27	29	18	10	11	7	5	6	14	16	17	29	20	—2
Bristol	155	131	111	123	116	40	33	32	40	36	116	113	98	116	119	—3
Warren	82	108	71	90	94	45	35	30	34	33	72	72	70	78	78	16
BRISTOL COUNTY	258	259	209	242	228	95	79	69	79	75	202	201	185	223	217	11
Coventry	97	95	72	108	95	23	19	31	39	22	81	82	72	76	67	28
East Greenwich	66	56	71	47	71	38	29	26	32	31	57	39	72	49	44	27
West Greenwich	22	18	23	14	22	5	4	2	2	5	11	18	12	14	9	13
Warwick	321	335	286	336	322	107	108	109	114	127	153	136	199	248	223	99
KENT COUNTY	506	504	452	505	510	173	160	168	187	185	302	275	355	387	343	167
Jamestown	5	10	9	9	6	2	1	......	1	4	4	10	8	4	11	—5
Little Compton	11	9	15	16	7	8	11	15	4	9	23	16	16	22	14	—7
Middletown	16	33	14	29	33	7	2	2	3	6	12	14	17	21	15	18
New Shoreham	32	31	25	36	24	6	12	6	13	13	20	21	28	16	22	2
Portsmouth	29	29	27	21	26	16	5	7	14	9	27	29	32	25	17	9
Tiverton	43	53	68	55	79	21	23	13	16	11	33	44	43	41	49	30
TOWNS, NEWPORT CO.	136	165	158	166	175	69	54	43	51	52	119	134	144	129	128	47
NEWPORT CITY	587	570	529	600	632	131	134	147	134	123	311	274	267	309	313	319

TABLE XIII.—Continued.

TOWNS AND DIVISIONS OF THE STATE.	BIRTHS.					MARRIAGES.					DEATHS.					Excess of births over deaths, 1887.
	1883.	1884.	1885.	1886.	1887.	1883.	1884.	1885.	1886.	1887.	1883.	1884.	1885.	1886.	1887.	
Burrillville	100	115	93	109	99	26	30	31	39	36	86	85	75	70	75	24
*Cranston	133	134	129	136	157	22	19	26	28	34	108	109	104	83	102	55
Cumberland	176	174	200	211	164	71	62	58	48	72	146	158	176	189	140	24
East Providence	138	154	157	181	131	53	45	39	68	55	97	105	113	99	96	35
Foster	25	17	16	20	20	17	13	16	11	12	31	24	29	24	33	—13
Glocester	49	39	47	52	43	10	20	13	14	7	23	31	30	36	39	4
Johnston	119	170	167	154	140	33	26	35	30	26	47	83	91	128	172	—32
Lincoln	391	401	381	540	595	115	160	105	110	114	274	283	335	416	413	182
North Providence	21	24	23	29	30	3	3	5	9	7	17	16	19	17	22	8
North Smithfield	50	74	61	52	70	22	22	13	27	23	37	36	85	35	36	34
Pawtucket City	527	557	530	558	620	214	197	254	253	316	390	353	434	470	553	67
Scituate	79	69	67	58	54	37	47	32	36	50	71	58	78	62	59	—5
Smithfield	54	62	36	66	35	24	14	17	26	16	27	24	32	22	27	8
Woonsocket	411	447	414	523	541	154	157	147	161	163	311	282	304	372	444	97
PROVIDENCE CO.	2,273	2,437	2,321	2,689	2,699	801	815	791	860	931	†1,707	†1,742	1,855	2,023	2,211	488
PROVIDENCE CITY	2,916	2,956	2,936	2,960	2,963	1,777	1,114	1,091	1,249	1,284	2,357	2,233	2,164	2,353	2,640	323
Charlestown	14	25	10	18	16	13	12	9	8	2	12	16	18	9	21	—5
Exeter	22	20	13	16	13	17	11	9	10	8	19	18	19	17	18	—5
Hopkinton	49	52	50	45	56	34	29	22	26	44	39	24	37	50	32	24
North Kingstown	82	80	70	79	82	23	23	20	21	23	41	50	52	48	80	2
South Kingstown	108	73	104	107	111	35	39	47	49	45	42	52	70	78	62	49
Richmond	23	27	42	44	36	8	10	9	8	3	20	16	23	30	33	3
Westerly	72	137	134	150	147	44	48	63	68	64	48	106	94	105	105	42
WASHINGTON COUNTY	370	414	423	459	461	174	172	179	190	189	221	282	313	337	351	110
STATE INSTITUTIONS	....	....	....	....	....	....	....	....	....	....	....	....	106	88	137	—137
WHOLE STATE	7,046	7,305	7,028	7,621	7,668	2,611	2,558	2,488	2,750	2,839	5,282	5,141	5,389	5,849	6,340	1,328

* Exclusive of deaths in State Institutions.

† Including State Institutions.

The variations in the number of each of the events of births, marriages and deaths, in the different towns and in the same town during each of the five years, 1883–1887, may be readily seen in Table XIII.

In the enumeration of births, the lessening number in some of the towns, from year to year, will scarcely fail of notice. This diminution is in part the result of a lessened population of all ages, and in part the departure from those towns of a more considerable proportion of the population, in the period of life between the ages of eighteen and thirty years.

The increase in the number of births from year to year will be found in those towns where the industrial enterprises are larger in number and continually extending, where more profitable occupations hold out inducements for those entering upon the threshold of life, to leave the homesteads of their fathers and seek competence and citizenship in more favored places, and by marriage add to the larger number and the larger birth-rate of their adopted towns.

The variations in the number of marriages and of deaths from year to year in the towns, increasing or decreasing, are to be largely attributed to the same causes, the death-rate, however, being, as a rule, larger in the more compactly settled communities than in the sparsely settled, partly from the larger proportional number of children and partly from more unsanitary surroundings and conditions of living.

TABLE XIV.

Births, Marriages and Deaths in Rhode Island, in 1887, with the number of each in every 1,000 of the Population of each Town, and the Excess of the Births over the Deaths in every 1,000 of the Population.

TOWNS AND DIVISIONS OF THE STATE.	Population, 1887.*	Births, 1887.	Births per 1,000 of Population.	Marriages, 1887.	Persons married pr 1,000 of Population.	Deaths, 1887.	Deaths per 1,000 of Population.	Excess of Births over Deaths, per 1,000.
Barrington	1,394	18	13.0	6	8.6	20	14.4	—1.4
Bristol	6,000	116	19.3	36	12.0	119	19.8	—0.5
Warren	4,300	94	21.8	33	15.4	78	18.1	3.7
BRISTOL COUNTY	11,694	228	19.6	75	12.8	217	18.2	1.5
Coventry	5,000	95	19.0	22	8.8	67	13.4	5.6
East Greenwich	2,800	71	25.4	31	22.2	44	15.7	9.7
West Greenwich	850	22	25.9	5	11.8	9	10 6	15.3
Warwick	13,508	322	23.8	127	18.8	223	16.5	7.3
KENT COUNTY	22,158	510	23.0	185	16.8	343	15.5	7.5
Jamestown	520	6	11 5	4	15.4	11	21.2	—9.7
Little Compton	1,052	7	6.7	9	17.2	14	13.3	—6.6
Middeltown	1,175	33	28.1	6	10.2	15	12 8	15 3
New Shoreham	1,275	24	18.8	13	20.4	22	17.3	1.5
Portsmouth	2,000	26	13.0	9	9.0	17	8.5	4 5
Tiverton	2,725	79	28.6	11	8.0	49	18.0	10.6
TOWNS, NEWPORT COUNTY	8,747	175	20.0	52	11.8	128	14 6	5.4
NEWPORT CITY	20,466	632	30.9	123	12.0	313	15.3	15.6
Burrillville	5,400	99	18.3	36	13.4	75	13.9	4.4
Cranston	4,800	157	32 7	34	14.2	102	21.2	11.5
Cumberland	7,263	164	22.06	72	19 8	140	19.5	3.1
East Providence	7,000	131	18.7	55	15.8	96	13.7	5.0
Foster	1,390	20	14.4	12	17.4	33	23.7	—9.3
Glocester	2,100	43	20.5	7	6.6	39	18.6	1.9
Johnston	7,500	140	18.7	26	7.0	172	23.1	—4.4
Lincoln	18,000	595	33.1	114	12.6	413	23.0	10.1
North Providence	1,550	30	19.4	7	9.0	22	14.2	5.2
North Smithfield	3,160	70	22.1	23	14.6	36	11.4	10.8
Scituate	3,600	54	15.0	50	27.8	59	16.4	—1.4
Smithfield	2,500	35	14.0	16	12.8	27	10.8	3.2
Woonsocket	19,000	541	28.5	163	17.2	444	23.4	5.1
TOWNS, PROVIDENCE COUNTY	83,263	2,079	25.0	615	15.4	1,658	19.3	5.7
PAWTUCKET	24,800	620	25.0	316	24.6	553	22.3	2.7
PROVIDENCE CITY	122,000	2,963	24.3	1,284	21.0	2,640	21.6	2.7
Charlestown	1,050	16	15.2	2	3.8	21	20.0	—4.8
Exeter	1,050	13	12.4	8	15.2	18	17.1	—4.7
Hopkinton	2,767	56	20.2	44	33.0	32	11.2	9.0
North Kingstown	3,870	82	21.2	23	11.8	80	20.7	0.5
South Kingstown	5,600	111	19.8	45	16.0	62	11.1	8.7
Richmond	1,800	36	20.0	3	3.4	33	18.3	1.7
Westerly	6,500	147	22.6	64	19.6	105	16.2	6.4
WASHINGTON COUNTY	22,637	461	20.4	189	16.6	351	15.5	4.9
STATE INSTITUTIONS	1,400	......	......	......	......	137	97.8	......
WHOLE STATE	317,074	7,668	24.2	2,839	18.0	6,340	19.9	4.3

* By estimation.

BIRTHS. *Proportion to Population.*

As usual, the towns presented in their returns of births, marriages and deaths in 1887, the varied disproportions in the number of each of the events so observable in preceding years. These disproportions of one year with another, and of each of the events with each other during the same year, are, however, largely confined to the smaller towns; the larger the population the more uniform are the returns from year to year.

Leading in the list of towns having the largest birth-rate, are Lincoln, with 33.1 births in every 1000 of the population, Cranston, with 32.7 in every 1000, and Newport city, with 30.9 in every 1000. The influx of summer residents, and to some extent of summer visitors, adds largely to the birth-rate of Newport city during the warmer months of the year.

Among the towns having the smallest birth-rate, are Jamestown, with 11.5 births in every 1000 of population, Exeter, 12.4 in every 1000, Barrington and Portsmouth, each 13.0 in every 1000.

One-quarter of the towns had a birth-rate of 25 and over per 1000, and about one-third of the remainder, birth-rates from 20 to 25 per 1000.

The proportions of births to population in several counties entire, the towns of Providence and Newport counties, the cities of Providence, Pawtucket and Newport, and the whole State, during the last four years, are as follows:

	1887.	1886.	1885.	1884.	
Bristol County	19.6	20.9	18.4	22.9	births in every 1,000.
Kent County	23.0	22.8	20.9	23.3	births in every 1,000.
Newport County Towns	20.0	18.9	18.1	19.0	births in every 1,000.
Newport City	30.9	29.3	27.0	29.2	births in every 1,000.
Providence County Towns	25.0	27.2	22.9	23.8	births in every 1,000.
Pawtucket City	25.0	22.5	23.1	24.3	births in every 1,000.
Providence City	24.3	24.7	24.8	25.1	births in every 1,000.
Washington County	20.4	20.3	18.8	18.5	births in every 1,000.
Whole State	24.2	24.5	23.1	24.0	births in every 1,000.

PERSONS MARRIED. *Proportion to Population.*

It has been before observed that the disposition to be married in public, and especially in some church auditorium, usually in some larger town and by some popular clergyman, reduces the percentage of persons recorded as married in many of the smaller towns below any uniform relation to population, and below the actual number of residents married.

The proportion to the population, of persons married, can be more correctly shown in counties, or in cities and aggregates of towns.

The following summary will present the proportions in the manner suggested, for the last three years:

	1887.	1886.	1885.	
Bristol County	12.8	13.6	12.2	persons married in every 1,000.
Kent County	16.8	16.9	15.5	persons married in every 1,000.
Newport County Towns	11.8	11.6	9.9	persons married in every 1,000.
Newport City	12.0	13.1	15.0	persons married in every 1,000.
Providence County Towns	15.4	15.9	15.6	persons married in every 1,000.
Pawtucket	24.6	20.0	22.3	persons married in every 1,000.
Providence City	21.0	20.8	18.5	persons married in every 1,000.
Washington County	16.6	15.9	15.1	persons married in every 1,000.
Entire State	18.0	17.7	16.3	persons married in every 1,000.

DEATHS. *Proportion to Population.*

The town having the largest death-rate in 1887 was Foster, with 23.7 in every 1,000 of population. In that town, with so large a death-rate in 1887, a death-rate unprecedented there, not a single death was caused by any zymotic or contagious disease, one case of typhoid fever alone excepted.

The towns following in the order of the largest death-rate are Woonsocket, Johnston and Lincoln, with the proportions of 23.4, 23.1 and 23.0, respectively, in every 1000 of population.

The death-rate was smallest in the town of Portsmouth, with 8.5 in every 1000; in the town of West Greenwich, with 10.6; and Smithfield, with 10.8 in every 1000.

Below may be found a summary of the ratios of mortality, in the cities and larger divisions of the State, and the whole State, for 1885, 1886 and 1887:

	1887.	1886.	1885.	
Bristol County	18.2	19.2	16.3	in every 1,000 of the population.
Kent County	15.5	17.5	16.4	in every 1,000 of the population.
Towns, Newport County	14.6	14.7	16.5	in every 1,000 of the population.
City of Newport	15.3	15.1	13.6	in every 1,000 of the population.
Newport County	15.2	15.0	14.5	in every 1,000 of the population.
Towns, Providence County	19.3	18.8	18.1	in every 1,000 of the population.
City of Pawtucket	22.3	19.0	19.0	in every 1,000 of the population.
City of Providence	21.6	19.6	18.3	in every 1,000 of the population.
Providence County	21.0	19.2	18.3	in every 1,000 of the population.
Washington County	15.5	15.0	14.1	in every 1,000 of the population.
Whole State	19.9	18.8	17.7	in every 1.000 of the population.

The above comparative summary shows that the death-rate was smaller in Bristol and Kent Counties during 1887 than during the previous year, and larger in all the other divisions and cities of the State.

A comparative exhibit of the relative proportions of the births, marriages and deaths in the different counties and larger towns, during the last three years, may be found in the following summary :

	Births per 1000 of population.			Marriages. Persons married per 1000 of population.			Deaths per 1000 of population.		
	1887.	1886.	1885.	1887.	1886.	1885.	1887.	1886.	1885.
Bristol County	19.6	20.9	18.4	12.8	13.6	12.2	18.2	19.2	16.3
Kent County	23.0	22.8	20.9	16.8	16.9	15.5	15.5	17.5	16.4
Newport County Towns	20.0	18.9	18.1	11.8	11.6	9.9	14.6	14.7	16.5
Newport City	30.9	29.3	27.0	12.0	13.1	15.0	15.3	15.1	13.6
Providence County Towns	25.0	27.2	22.9	15.4	15.9	15.6	19.3	18.8	18.1
City of Pawtucket	25.0	22.5	23.1	24.6	20.0	22.3	22.3	19.0	19.0
City of Providence	24.3	24.7	24.8	21.0	20.8	18.5	21.6	19.6	18.3
Washington County	20.4	20.3	18.8	16.6	15.9	15.1	15.5	15.0	14.1
Entire State	24.2	24.5	23.1	18.0	17.7	16.3	19.9	18.8	17.7

TABLE XV.

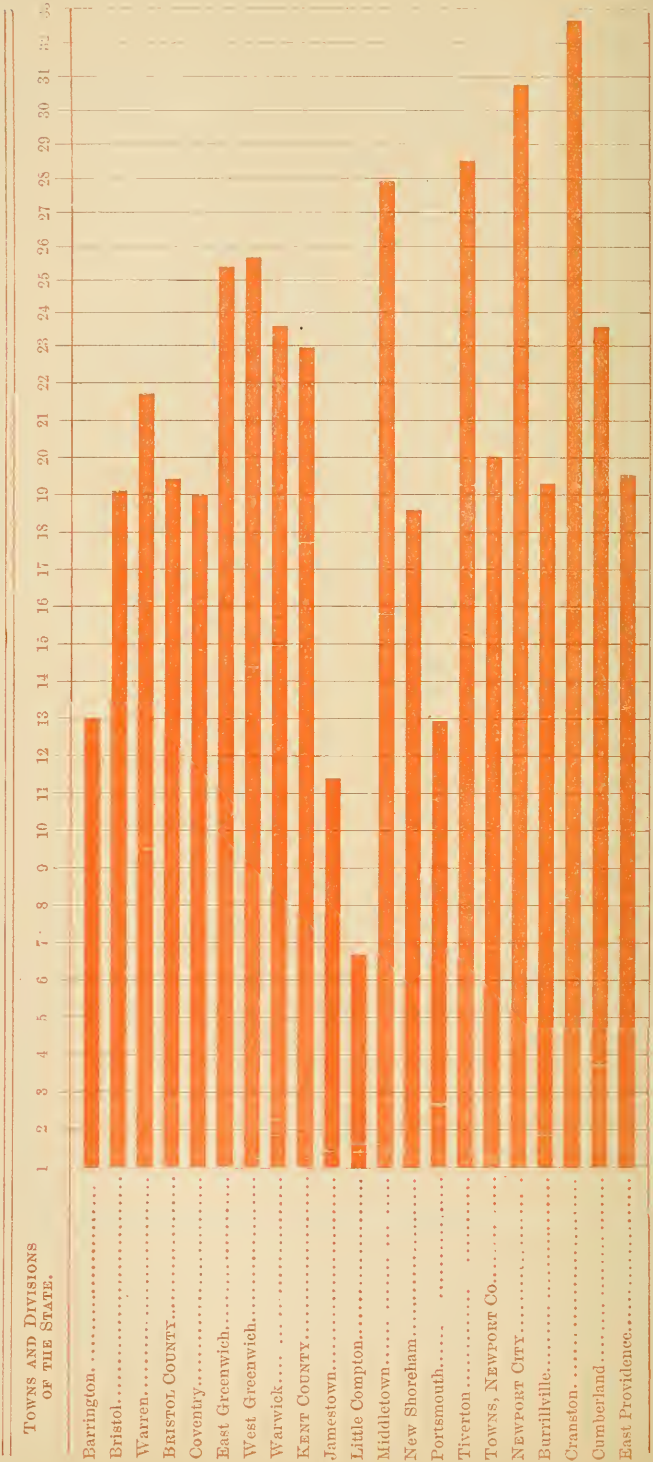
Showing the Proportions of Births, Marriages and Deaths to the Population, in the Aggregate for the whole State, in each of the last nineteen years.

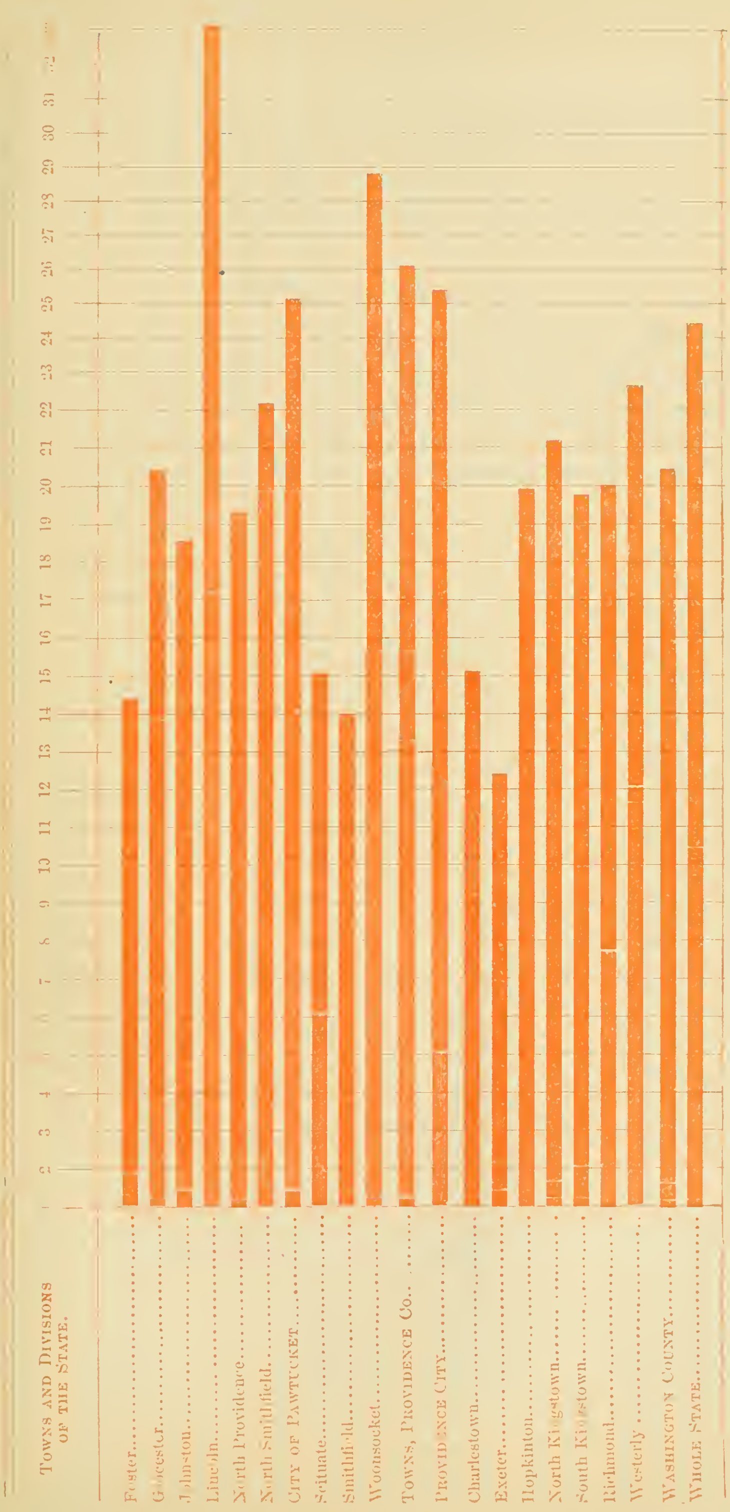
YEARS.	BIRTHS.		MARRIAGES.		DEATHS.		
	Number.	Of population one birth in every	Number.	Of population one person married in every	Number.	Of population one death in every	Deaths in every 1,000 of the population.
1869	5,245	41.4	2,289	47.5	3,382	64.2	15.6
1870	5,215	41.7	2,362	46.0	3,238	67.1	14.9
1871	5,678	38.2	2,336	46.5	3,444	65.0	15.4
1872	6,143	35.4	2,537	42.9	4,247	51.2	19.5
1873	6,022	36.1	2,630	41.3	4,403	49.4	20.3
1874	6,466	39.9	2,541	50.8	4,229	61.1	16.4
1875	6,508	39.7	2,485	52.0	4,317	59.8	16.7
1876	6,329	40.8	2,253	57.3	4,116	62.7	15.9
1877	6,235	41.4	2,282	56.6	4,450	58.0	17.2
1878	6,714	38.5	2,324	55.7	4,441	58.1	17.2
1879	6,350	43.6	2,396	57.8	4,472	61.9	16.0
1880	6,295	43.9	2,769	49.9	4,829	57.3	17.5
1881	6,761	40.9	2,750	50.3	5,016	55.1	18.1
1882	6,825	40.5	2,634	52.5	5,074	54.5	18.3
1883	7,046	39.2	2,611	52.9	5,282	52.4	19.1
1884	7,305	41.7	2,558	59.4	5,141	59.2	16.1
1885	7,028	43.3	2,488	61.1	5,389	56.4	17.7
1886	7,621	40.8	2,750	56.5	5,849	53.2	18.8
1887	7,668	41.3	2,839	55.8	6,340	50.0	19.9

BIRTH RATES.

Diagram I.—Showing the number of births in every 1000 of the population, in each town and each county in the State, during the year 1887, computed upon the population as estimated by the town authorities.

For explanation see foot note on next page.





The figures at the top of the perpendicular lines indicate, in whole numbers, the number of births during the year in every 1000 persons. The spaces are fractional parts of one. For instance, the heavy horizontal line against Foster, at the top of this page, reaches across about four-tenths of the space between the perpendicular lines 14 and 15. It shows the birth rate of Foster, in 1887, was about fourteen and four-tenths in every 1000 of the population, according to estimation.

BIRTHS, 1887.

The general statistics of births in Rhode Island, during the year 1887, derived from the returns sent to this office, may be found on pages 2 to 6, inclusive, in Tables I, II and III.

The whole number reported is 7,668, as before stated, and is 47 more than the number in 1886.

SEX OF THE CHILDREN BORN.

Of the 7,668 children whose births were reported in 1887, there were 3,968 males and 3,700 females. This gives 107. 2 males to each 100 females, or 517.5 males and 482.5 females in each 1,000 children.

The following Table shows the numbers and sex, and the proportions of each sex of the children born in Rhode Island, in each of the last thirty-four years:

TABLE XVI.

Years.	Males.	Females.	Males to each 100 Females.	Per 1,000 Births Males.	Per 1,000 Births Females.
1854	1,081	1,003	107.8. or	518.7 and	481.3
1855	1,492	1,421	105.0, or	512.2 and	487.8
1856	1,479	1,407	105.1, or	512.5 and	487.5
1857	2,057	1,948	105 6, or	513.6 and	486.4
1858	2,200	2,053	107.2, or	517.3 and	482.7
1859	2,209	2,097	105.3, or	513.0 and	487.0
1860	2,263	2,212	102.3, or	505.7 and	494.3
1861	2,531	2,291	110.5, or	524.9 and	475.1
1862	2,152	1,967	109.4, or	522.5 and	477.5
1863	1,892	1,288	105.8, or	514.1 and	485.9
1864	1,949	1,942	100 3, or	500.9 and	499.1
1865	2,096	1,857	112.9, or	530.2 and	469.8
1866	2,546	2,356	108.0, or	519.4 and	480.6
1867	2,665	2,464	107.0, or	518.7 and	481.3
1868	2,745	2,627	104.5, or	511.0 and	489.0
1869	2,685	2,560	104.9, or	511.9 and	488.1
1870	2,679	2,536	105.6, or	513.7 and	486.3
1871	2,878	2,800	102.8, or	506.9 and	493.1
1872	3,085	3,058	100.9, or	502.2 and	497.8
1873	3,135	2,887	108.6, or	520 6 and	479.4
1874	3,311	3,155	104 9, or	512.1 and	487.9
1875	3,362	3,146	106.9, or	516.6 and	483.4
1876	3,291	3,038	108.3, or	520.0 and	480.0
1877	3,163	3,072	103.0, or	507.3 and	492.7
1878	3,402	3,312	102.7, or	506.7 and	493.3
1879	3,259	3,091	105 4, or	513 2 and	486.8
1880	3,241	3,054	106 8, or	514.8 and	485 2
1881	3,498	3,263	107.2, or	517.3 and	482.7
1882	3,509	3,316	105.8, or	514.1 and	485.9
1883	3,548	3,498	101.4, or	503.5 and	496.5
1884	3,713	3,592	103.4, or	508.3 and	491.7
1885	3,591	3,437	104.4, or,	510.3 and	489.7
1886	3,897	3,724	104.6, or	511.3 and	488.7
1887	3,968	3,700	107.2, or	517.5 and	482.5

An examination of Table XVI will show the continued usual preponderance in the births of males. This disproportion, however, lessens as the two sexes approach adult life, where they are about equal in number. More male children die under five years of age than female. This peculiar susceptibility of male children to mortality from infantile diseases is too well known to need further illustration.

PROPORTION OF THE SEXES.

In Table II, on pages 4 and 5, will be found the number of children born in the different divisions of the State during the year 1887, together with the number of each sex.

The following table will give more concisely the whole number of children born, arranged according to sex and locality, and the proportion of male children to every 100 female children.

TABLE XVII.

BIRTHS, 1887.	Bristol County.	Kent County.	Newport County Towns.	Providence County Towns.	Washington County.	Newport City.	Pawtucket.	Providence City.	Whole State.
Males	122	280	94	1,065	238	321	310	1,538	3,968
Females	106	230	81	1,014	223	311	310	1,425	3,700
Total	228	510	175	2,079	461	632	620	2,963	7,668
Males to each 100 females	115.1	121.7	116.0	105.0	106.7	103.2	100.0	107.9	107.2

Bristol county has the usual preponderance of male births. Kent county also shows so large an excess of male births over female as to be noticeable. Here the difference is more than 20 per cent. between the two sexes. In 1886 this disparity was on the side of the female sex, about 20 per cent. more females than males being born that year. This was unprecedented. But in 1887, curiously enough, the larger number of males born balances the two accounts, and the disparity disappears.

Washington county, in 1886, had the greatest number of male births of any division. In 1887 the general average is regained.

In the city of Pawtucket the births of each sex were equal. This circumstance is very remarkable in so large a population. It was true, however, in the case of Newport county in 1870. In small towns it is more frequent.

It will also be observed that for the whole State, in 1887, there was a slight increase of male births over female births. The proportion of 1881 was reached, there having been a slight falling off in this respect since that year. Another fact, well to note, is that where in one division of the State a large excess in the birth of one sex is noticed, this disparity is corrected by a proportionate excess of births of the opposite sex in another part of the State; so that the numerical proportion between the two sexes is thus maintained.

The following Table exhibits the proportions, with births of both sexes, for the past twenty-five years, in the larger divisions of the State and in the whole State:

TABLE XVIII.

BIRTHS.	NUMBER OF MALES TO EACH 100 FEMALES.						
	Bristol County.	Kent County.	Newport County.	Providence County Towns.	Providence City	Washington County.	Whole State.
1863	120.0	98.4	97.0	101.8	111.4	108.7	105.8
1864	166.8	87.3	90.6	107.4	97.3	103.4	100.3
1865	119.3	118.2	108.8	118.8	113.8	88.1	112.9
1866	109.4	113.1	103.4	104.9	108.4	124.0	108.0
1867	115.5	98.3	117.8	106 3	104.5	120.4	107.7
1868	117.4	88.7	100.2	101.6	102.4	136.5	104.5
1869	115.7	116.7	102.7	98.0	107.5	120.6	104.9
1870	126.4	111.6	100.0	105.1	104.9	99.5	105.6
1871	131.8	97.9	132.5	100.8	95.2	113.3	102.8
1872	109.2	92.8	109.1	103.5	95.7	110 6	100.9
1873	129.2	113.0	117.9	104.5	109.0	104.7	108.6
1874	98.7	111.9	101.3	110.4	102.9	94.0	104.9
1875	95.2	103.1	97.7	104.3	109.1	134.3	106.9
1876	142.1	104.4	108.5	108.0	106.8	103.7	108 3
1877	138.7	102.4	98.5	100.3	104.9	95.3	103.0
1878	120.5	120.6	94.8	101.5	106.8	78.8	102.7
1879	124.3	95.5	103.6	105.4	105.7	106.3	105.4
1880	117.2	110,5	113.0	102.4	107.6	95.4	106.1
1881	91.2	111.3	102.0	105.9	109.0	115.7	107.2
1882	94.7	110.2	112.5	103.1	106.5	105.7	105.8
1883	94.0	97.6	97.0	103.5	102.2	102.2	101.4
1884	105.0	111.7	92.9	102 5	105.8	99.0	103.4
1885	132.2	107.3	98.0	104.8	103.6	104.3	104.4
1886	120.0	81.7	102.6	106.7	105.0	121.7	104.6
1887	115.1	121.7	106.6	103.9	107.9	106.7	107.2

The following summary will show the average number of males to each 100 females, born during the twenty-five years from 1863 to 1887, in the different divisions of the State:

Bristol County	115.1 males to each 100 females.
Kent County	105.4 males to each 100 females.
Newport County	105.1 males to each 100 females.
Providence County Towns	104.9 males to each 100 females.
Providence City	105.3 males to each 100 females.
Washington County	106.9 males to each 100 females.
Whole State	104.8 males to each 100 females

BIRTHS AND SEASON.

Table II, on pages 4 and 5 of this report, gives the number of births occurring in the different months of the year, in the several divisions of the State.

According to this table, the greatest number of births for any one month in 1887 occurred in December, and in any quarter, in the fourth; a fact almost invariably observed in this part of the year.

There is also a difference of but one or two births in the three months, August, September and October, respectively, which is quite unusual.

The following Table shows the total number of children born in the State of Rhode Island, according to the returns, in each quarter of each of the last six years; and also the aggregate number and the percentage of the aggregate of each quarter in thirty-four years, from 1854 to 1887, inclusive:

TABLE XIX.

QUARTERS.	1887.	1886.	1885.	1884.	1883.	1882.	1854 to 1887, inc.	
							Number.	Per cent.
January—March	1,828	1,763	1,669	1,734	1,641	1,616	43,708	23.67
April—June	1,859	1,749	1,736	1,755	1,668	1,622	43,546	23.58
July—September	1,956	2,041	1,768	1,868	1,893	1,711	48,222	26.12
October—December	2,025	2,068	1,855	1,948	1,844	1,876	49,166	26.63
Whole Year	7,668	7,621	7,028	7,305	7,046	6,825	184,642	100.00

By the above Table it will be seen that, according to the registration of thirty-four years, the average proportions of births to the whole number of births, in the different quarters of the year, were as follows:

January—March	236.7 in every 1,000 births.
April—June	235.8 in every 1,000 births.
July—September	261.2 in every 1,000 births.
October—December	266.3 in every 1,000 births.

The proportions of births in Rhode Island, in the different quarters of the year, to the whole number of births in 1887, were as follows:

1.	January—March	23.8 per cent., or	238 in every 1,000
2.	April—June	24.3 per cent., or	243 in every 1,000
3.	July—September	25.5 per cent., or	255 in every 1,000
4.	October—December	26.4 per cent., or	264 in every 1,000
		100.0	1,000

First six months	481 births in every one thousand.
Second six months	519 births in every one thousand.

BIRTHS; SEX AND SEASON.

In Table II, on pages 4 and 5, will also be found the number of births of each sex by months, as they occurred in the different divisions of the State, during the year 1887. From it we ascertain the number of each of the sexes born during each quarter of the year, with their relative proportions; and also the aggregates and proportions of the same for the whole State.

The following Table will present a summary of the quarterly periods, number of births and proportions of the sexes, for the same year:

	Males.	Females.	Males to each 100 Females.	Per 1,000, each quarter, Males.	Per 1,000, each quarter, Females.
1. January—March	915	913	100.2, or	501	499
2. April—June	975	884	110.3, or	524	476
3. July—September	1,019	937	108.8, or	522	478
4. October—December	1,059	966	109.6, or	523	477
Whole year, 1887	3,968	3,700	107.2, or	517	483

The following Table shows the number of male children born to every 100 female children, in each quarter of the last four years; and also the proportion of births of male children to each 100 female children born, during four periods of five years each, from 1866 to 1885, inclusive;

TABLE XX.

YEARS.	1887.	1886.	1885.	1884.	5 years, 1881–1885.	5 years, 1876–1880.	5 years, 1871–1875.	5 years, 1866–1870.
First Quarter	100.2	103.8	113.2	98.1	105.8	106.0	101.5	106.7
Second Quarter	110.3	103.8	107.1	111.4	104.8	102.7	104.7	107.3
Third Quarter	108.8	103.5	98.4	104.6	105.1	107.1	104.8	106.0
Fourth Quarter	109.6	107.2	100.1	100.1	102.5	108.2	106.5	104.8
Total average	107.2	104.6	104.4	103.4	104.5	106.2	104.2	106.2

The following summary will show the proportions of the sexes born in the State in each quarter of the year, in the aggregate of a period of twenty years:

	Males to each 100 Females.		Males.		Females.	
1. January—March	105.0,	or	512.2	and	487.8	in every 1,000 births.
2. April—June	104.9,	or	511.9	and	488.1	in every 1,000 births.
3. July—September	105.7,	or	513.9	and	486.1	in every 1,000 births.
4. October—December	105.5,	or	513.4	and	486.6	in every 1,000 births.
Whole Number, 20 years	105.3,	or	513.0	and	487.0	in every 1,000 births.

That the season of the year has any considerable influence in the causation of sex, seems to be negatived by the statistics presented above.

PARENTAGE.

By reference to Table I, page 2, in the division of births there will be found the parentage of the children born in Rhode Island, during the year 1887. It will be seen that of the whole number—7,668—there were 2,935 of American parentage, 3,315 foreign, and 1,418 of mixed parentage.

By mixed parentage is meant the children born of American fathers and foreign mothers, and of foreign fathers and American mothers. Of American fathers there were 672, and of foreign fathers 746.

The following Table will show the number and parentage of the children born in the State, and the variations of the same from year to year, in each of the last three years; and also the number and variations occurring in six periods of five years each, from 1858 to 1887, inclusive;

TABLE XXI.

PARENTAGE.	1887.	1886.	1885.	5 years, 1883 to 1887.	5 years, 1878 to 1882.	5 years, 1873 to 1877.	5 years, 1868 to 1872.	5 years, 1863 to 1867.	5 years, 1858 to 1862.
American fath. and mo....	2,935	3,139	2,919	15,001	14,169	13,431	12,214	9,712	10,609
Foreign fath. and mo......	3,315	3,155	2,858	15,245	13,562	13,990	12,366	9,968	9,697
American fath., for. mo...	672	652	578	3,044	2,327	1,782	1,353	876	814
Foreign fath., Amer. mo..	746	675	673	3,378	2,887	2,357	1,720	941	755
Parentage not stated.......	......	.....	......	....	....	....	....	70	223
Total....................	7,668	7,621	7,028	36,668	34,945	31,560	27,653	21,567	22,098

The following Table of *percentages* will show, in a different and perhaps clearer way, the same changes that have occurred in the proportions of the births in the different classes of parentage during the last three years; and during thirty years, from 1858 to 1887, inclusive, in six equal periods:

TABLE XXII.

PARENTAGE.	1887	1886.	1885.	5 years, 1883 to 1887.	5 years, 1878 to 1882.	5 years, 1873 to 1877.	5 years, 1868 to 1872.	5 years, 1863 to 1867.	5 years, 1858 to 1862.
American fath. and mo....	38.28	41 19	41.53	40.91	43.03	42.55	44.17	45.18	48.50
Foreign fath. and mo......	43.23	41.40	40.66	41.58	41.23	44.35	44 72	46.37	44.33
American fath., for. mo...	8.76	8 55	8.23	8 30	6 95	5.84	4.89	4.07	3.72
Foreign fath , Amer. mo...	9.73	8.86	9.58	9.21	8.79	7.26	6.22	4.38	3.45
Total.....	100.00	100.00	100.00	100 00	100.00	100.00	100.00	100.00	100.00

An examination of Table XXI will show that there has been a constant increase in the number of children of foreign parentage. The same may be said relative to the offspring of mixed marriages. Nearly 60 per cent. of the children born in this State during 1887 were of foreign and mixed parentage.

The following Table will present the percentages of children of American and of foreign-born fathers, and of American and foreign-born mothers, respectively, in each of the last three years, and in each of six periods of five years each, from 1858 to 1887, inclusive:

TABLE XXIII.

CHILDREN WITH	1887.	1886.	1885.	5 years, 1883 to 1887.	5 years, 1878 to 1882.	5 years, 1873 to 1877.	5 years, 1868 to 1872.	5 years, 1863 to 1867.	5 years, 1858 to 1862.
American fathers..........	47.04	49.74	49.76	49.21	50.08	48.40	49.06	49.25	52.22
Foreign fathers............	52.96	50.26	50.24	51.79	49.92	51.60	50.94	50.75	47.78
American mothers..........	48.01	50.05	51.11	49.91	51.79	49.80	50.39	49.56	51.95
Foreign mothers...........	51.99	49.95	48.89	50.09	48.21	50.20	49.61	50.44	48.05

The above Table gives the percentages of increase in the number of births of both foreign and mixed parentage. The same story is told here as in Tables XXI and XXII, a gradual falling off in the birth of children of purely American parentage. There are more foreign mothers married to American fathers than American born mothers intermarrying with fathers of foreign parentage. For a fuller discussion of this subject, see the last two Reports upon the Registration of births, marriages and deaths in Rhode Island. It may be added, however, that the following are some of the results arrived at:

For every 1,000 married women of all nativities there were 18.2 births; for every 1,000 in the class of American birth (whether of foreign parentage or not) there were in that class 15.1 births; and for every 1,000 in the class of foreign born there were 23.3 births.

Of the American married females, 998 were colored.

BIRTHS OF COLORED CHILDREN.

The number of births of children of colored parentage reported for the year 1887 is 211. The number is 1 less than that of 1886.

In regard to sex, the numbers and proportions were as follows, viz: Males 111, females 100; or 52.6 males and 47.4 females in every 100 births; or 111 males to each 100 females.

The following summary will show the changes that have occurred from year to year, in the proportions of the sexes of colored children born in Rhode Island, during the last twelve years:

Years.	Whole Number.	Males.	Females.	Males to each 100 females.
1876	171	64	107	59.8
1877	168	86	82	104.8
1878	172	79	93	85.0
1879	159	84	75	113.5
1880	140	75	65	115.4
1881	192	101	91	111.0
1882	179	76	103	73.7
1883	197	100	97	103.1
1884	185	91	94	96.8
1885	199	93	106	87.7
1886	212	117	95	123.0
1887	211	111	100	111.0

The following Table will show the location, number, sex, etc., of colored births during 1887:

TABLE XXIV.

Showing Number, Sex, etc., of Colored Births, 1887.

TOWNS AND CITIES.	Whole Number.	Males.	Females.	COUNTIES.
Bristol	1	1		Bristol County 1
Coventry	2		2	
East Greenwich	4	1	3	
Warwick	7	4	3	Kent County 13
Little Compton	1	1		
Middletown	1	1		
Newport City	58	35	23	Newport County 60
Burrillville	1	1		
Cranston	4	3	1	
East Providence	2	1	1	
Johnston	1		1	
Pawtucket	1	1		
Providence City	111	53	58	Providence County 120
Charlestown	2	2		
Exeter	1	1		
Hopkinton	2	2		
South Kingstown	9	4	5	
Richmond	2		2	
Westerly	1		1	Washington County 17
Total	211	111	100	211

NUMBER OF CHILD OF THE MOTHER.

The following Table shows the number of the child of the mother; that is, how many of the children born were reported as the first, second or third child, etc., of their respective mothers. The statistics on this subject begin with the year 1857, and the following Table includes the children reported during the last six years, and also the total for twenty-five years, 1857 to 1881, inclusive:

Table XXV.

Number of the Child of the Mother.	1882.	1883.	1884.	1885.	1886.	1887.	25 years, 1857–1881.
First	1,704	1,764	2,847	1,663	1,783	1,853	31,735
Second	1,189	1,365	1,356	1,362	1,559	1,483	26,110
Third	989	1,026	1,087	1,033	1,144	1,146	20,468
Fourth	805	822	777	767	795	918	15,423
Fifth	628	614	643	597	660	585	14,491
Sixth	481	443	472	498	481	475	8,330
Seventh	365	343	374	345	359	375	5,837
Eighth	245	245	269	282	287	289	2,996
Ninth	171	169	187	168	202	198	2,624
Tenth	93	106	103	134	131	143	1,711
Eleventh	56	64	81	73	87	78	984
Twelfth	50	37	49	57	55	65	602
Thirteenth	30	23	32	27	39	32	308
Fourteenth	12	9	16	11	19	15	151
Fifteenth	2	7	5	7	10	6	91
Sixteenth	4	2	0	1	7	3	49
Seventeenth	0	6	4	1	2	3	29
Eighteenth	1	1	2	1	1	0	8
Nineteenth	0	0	0	1	0	0	5
Twentieth	0	0	1	0	0	1	3
Twenty-first	0	0	0	0	0	0	3
Twenty-second	0	0	0	0	0	0	2
Total	6,825	7,046	7,305	7,028	7,621	7,668	129,960

The increase in the whole number of births in 1887, over the previous year, was 47 only, or about six-tenths of one per cent. The increase of population was probably not less than twice that percentage.

The increase in number in the class of first child of the mother was nearly four per cent., while there was a large decrease in the class of second and fifth child of the mother.

It is not unusual to find varying proportions from year to year, but there seems to be an increased proportional number of mothers who have ten or more children.

The proportion of each class to the whole number will be shown by the following Table, which gives the percentage of the children born in each of the last five years, who were respectively the first, second, third, etc., children of the mothers, and which will also give the average percentage of each class of births, during a period of ten years, from 1868 to 1877, inclusive, and of five years, 1878 to 1882, and from 1883 to 1887, inclusive :

TABLE XXVI.

NUMBER OF THE CHILD.	1887.	1886.	1885.	1884.	1883.	5 years, 1883 to 1887.	5 years, 1878 to 1882.	10 years, 1868 to 1877.
First	24.16	23.40	23.66	25.28	25.03	24.30	23.1	25.2
Second	19.34	20.45	19.38	18.56	19.37	19.22	18.7	20.7
Third	14.94	15.01	14.70	14.88	14.56	14.82	16.9	15.5
Fourth	11.84	10.43	10.91	10.64	11.66	11.05	12.2	11.4
Fifth	7.63	8.66	8.49	8.80	8.71	8.56	9.1	8.4
First to Fifth	77.91	77.95	77.14	78.16	79.33	77.8	80.0	81.1
Sixth and over	22.09	22.05	22.83	21.84	20.67	22.2	20.0	18.9
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.0	100.0

PLURALITY BIRTHS.

The general statistics in relation to plural births, in Rhode Island, may be found on page 6, in Table III.

There were eighty-four cases during the year, all of which were twins with the exception of one case of triplets, and making the number of one hundred and sixty-nine children.

Of the 169 children of plural birth, 88 were males, and 81 were females.

The cases occurred in the different divisions of the State as follows: Bristol county, 2 ; Kent county, 6 ; Newport county towns, 5 ; Newport city, 15 ; Providence county towns, 20 ; Providence city, 28 ; Washington county, 8.

The following exhibit will show the parentage of children of plurality birth in Rhode Island, in 1887, and number of each :

Parents, native Americans, or born in the United States	57
“ born in Ireland	20
“ “ France, or French Canadians	8
“ “ England	10
“ “ Portugal	4
“ “ Germany	8
“ “ Italy	2
“ “ Western Islands	2
American father and Irish mother	2
American father and English mother	4
American father and French mother	2
American father and Nova Scotia mother	4
English father and Scotch mother	2
French father and American mother	4
Irish father and American mother	4
Irish father and English mother	6
Irish father and German mother	2
English father and Irish mother	4
English father and American mother	4
Scotch father and American mother	8
Swedish father and American mother	4
Italian father and Irish mother	2
Total	169

The months in which the plurality births occurred were as follows:

January	28	April	14	July	14	October	14
February	12	May	8	August	10	November	10
March	17	June	8	September	16	December	18
First Quarter	57	Second Quarter	30	Third Quarter	40	Fourth Quarter	42

First half of year............ 87 Second half of year.......... 82

Total 169

The general statistics of births, and number of cases reported in Rhode Island during a period of thirty-four years, that is, from 1854 to 1887, inclusive, are as follows :

180,785	cases of single births	giving	180,785 children.
1,946	cases of twin births	giving	3,892 children.
21	cases of triple births	giving	63 children.
1	case of quadruple births	giving	4 children.
182,753	cases of child birth	giving	184,744 children.

Of the whole number of cases of child-birth (182,753) during the thirty-four years, one in 94 produced twins, one in 8,700 produced triplets, and one in 182,751 produced quadruplets.

Of the whole number of children born, during the same period (184,744), ascertained from the reports, one in every 47.4 was a twin, and one in every 2,932 was a triplet.

Of the 1,968 cases of plurality births which have occurred in the State during the last thirty-four years, there were 820 cases in which both parents were Americans ; 926 cases in which both parents were foreign ; 214 cases in which the parentage was mixed, that is, one American and one foreign parent ; and 8 in which the parentage was not stated.

The whole number of children born in plurality cases, during the thirty-four years, was 3,959, of whom 1,987 were males, and 1,968 were females ; the sex of the remaining four was not given.

STILL-BORN.

The whole number of still-born children reported in Rhode Island, for the year 1887, was 276 ; this number is 17 less than for the year 1886.

The following are the numbers reported from the different divisions of the State :

Bristol County	8
Kent County	8
Newport County Towns	4
Newport City	28
Providence County Towns	59
City of Pawtucket	22
Providence City	139
Washington County	8
Whole State	276

The following Table will give the number in each town from which still-births were reported :

Table XXVII.

Still-Born, 1887. Locality, Number, Sex, Parentage and Color.

TOWNS AND DIVISIONS OF THE STATE.	Whole Number.	SEX.		PARENTAGE.		COLOR.		Sex not stated.
		Males.	Females.	American.	Foreign.	White.	Colored.	
Barrington	1	....	1	....	1	1	....	....
Bristol	6	5	1	5	1	6	....	....
Warren	1	1	....	....	1	1	....	....
Bristol County	8	6	2	5	3	8	....	....
Coventry	2	....	2	....	2	2	....	....
East Greenwich	1	1	....	....	1	1	....	....
West Greenwich	1	....	1	1	....	1	....	....
Warwick	4	2	2	2	2	4	....	....
Kent County	8	3	5	3	5	8	....	....
Tiverton	4	2	2	3	1	4	....	....
Towns, Newport County	4	2	2	3	1	4	....	....
Newport City	28	15	13	18	10	25	3	....
Cranston	2	1	1	2	....	2	....	....
Cumberland	4	2	2	3	1	4	....	....
East Providence	5	4	1	3	2	5	....	....
Johnston	8	6	2	6	2	8	....	....
Lincoln	14	11	3	7	7	14	....	....
Scituate	1	....	1	1	....	1	....	....
Smithfield	1	1	....	....	1	1	....	....
Woonsocket	24	16	8	10	14	24	....	....
Towns, Providence Co	59	41	18	32	27	59	....	....
Pawtucket City	22	12	10	11	11	21	1	....
Providence City	139	85	54	58	81	135	4	....
Charlestown	2	1	1	2	....	2	....	....
South Kingstown	2	1	1	2	....	2	....	....
Westerly	4	3	1	4	....	4	....	....
Washington County	8	5	3	8	....	8	....	....
Whole State	276	169	107	137	139	268	8	....

SUMMARY OF SEX OF STILL–BORN.

The following Table shows the number and sex of the still-born children whose births were reported in Rhode Island, during each of the last five years, and also of a period extending from January 1, 1854, to December 31, 1885 :

TABLE XXVIII.

SEX.	1887.	1886.	1885.	1884.	1883.	January 1, 1854, to Dec. 31, 1885.
Males	169	157	149	178	132	3,824
Females	107	136	122	94	121	2,674
Total	276	293	271	272	253	6,498

The average proportions of the sexes of the still-born, for a period of thirty-two years, were as follows : In every 100 still-births there were about 59 males and 41 females.

Season of Still-Births.—During the thirty-two years included in Table XXVIII, the proportions in relation to season were as follows :

First Quarter	1,613	Third Quarter	1,743
Second Quarter	1,505	Fourth Quarter	1,637
First half of the year	3,118	Last half of the year	3,380
Total			6,498

PARENTAGE OF THE STILL–BORN.

Of the 276 still-born children reported in 1887, there were 134 of American, and 142 of foreign parentage, reckoned by the nativity of the fathers, that is, the father's name given ; and 137 of American and 139 of foreign, reckoned by the nativity of the mothers.

To show the changes that have occurred, from year to year, in the percentages of parentage of *the still-born*, reckoning by the parentage of the mothers, in contrast with the percentages of the same nativities to the *whole number of births*, reckoned by the parentage of the father, the following resumé, for various years and periods of years, is presented :

Years.	Of Whole Number Births. American. Foreign.	Of Whole Number Still-Born. American. Foreign.
14 years, 1859–1872	50.54 and 49.46 in each 100	51.84 and 48.16 in each 100.
10 years, 1873–1882	49.10 and 50.90 in each 100	51.84 and 48.16 in each 100.
1883	49.94 and 50.06 in each 100	50.98 and 49.02 in each 100.
1884	49.91 and 50.09 in each 100	49 63 and 50.37 in each 100.
1885	49.76 and 50.24 in each 100	48.00 and 52.00 in each 100.
1886	49.74 and 50.26 in each 100	47.44 and 52.56 in each 100.
1887	47.04 and 52.96 in each 100	49.63 and 50.37 in each 100.

ILLEGITIMATES. 1887.

The following Table will exhibit the number, sex, color, parentage and locality of birth of illegitimates in Rhode Island, in 1887:

Table XXIX.

TOWNS.	Whole Number.	SEX.		COLOR.		PARENTAGE.		Almshouses or Penal Institutions.
		Males.	Females.	Black.	White.	American.	Foreign.	
Warren	1	......	1	......	1	1	......	......
East Greenwich	4	2	2	2	2	4	......	......
West Greenwich	1	......	1	......	1	1	......	......
Middletown	1	1	......	......	1	......	1	......
Tiverton	2	1	1	......	2	1	1	......
Newport City	9	4	5	3	6	7	2	......
Burrillville	2	......	2	......	2	1	1	......
Cranston	4	3	1	......	4	1	3	3
Foster	1	1	......	......	1	1	......	......
North Smithfield	1	1	......	......	1	1	......	......
Pawtucket	2	2	......	......	2	2	......	......
Woonsocket	2	......	2	......	2	1	1	......
Providence City	17	8	9	9	8	12	5	4
South Kingstown	1	......	1	......	1	1	......	......
Whole State	48	23	25	14	34	34	14	7

There were returns, during 1887, of 48 children of illegitimate parentage. The number is 16 less than that of 1886.

Sex.—Of the 48 there were 23 males and 25 females.

The proportions of the sexes were at the rate of about 48 males and 52 females in each 100 births, or 92 males to every 100 females.

Color.—Of the 48 illegitimates born during 1887, 34 were white and 14 were colored.

Parentage.—Of the 48, 34 were born of American mothers and 14 of foreign born mothers. The colored illegitimates were of American parentage, with one exception. There were, of the 34 white illegitimates, 19 born of American mothers, and 13 of foreign born mothers.

The parentage given is of native born and foreign born, that is, mothers born in the United States of foreign born parents are reckoned as of American parentage.

Seven, or nearly one-seventh of the illegitimates, were born of pauper or criminal mothers, in public, charitable or penal institutions.

MARRIAGES, 1887.

The number of marriages registered in Rhode Island, during the year 1887, was 2,839. This number is 351 more than in 1885, and 89 more than in 1886.

The general statistics of marriage in 1887, in relation to season and number in the different divisions of the State, may be found in Table IV, on the seventh page.

The statistics in relation to the proportion to population of persons married in 1887, in each of the towns and general divisions of the State, may be found in Tables XIV and XV, on pages 70 and 74.

The following Table will present the general statistics of marriages, and the ratio of marriage to population, in each year for a period of twenty-eight years, 1860 to 1887, inclusive :

TABLE XXX.

YEARS.	Number Marriages.	Of population, one person married in every	Persons married pr 1,000 of population.
1860.......	1,748	50.0	20.0
1861.......	1,533	56.8	17.6
1862.......	1,450	61.1	15.1
1863.......	1,618	54.7	18.3
1864.......	1,844	50.1	19.9
1865......	1,896	48.7	20.5
1866.......	2,318	39.9	25.1
1867.......	2,344	39.8	25.1
1868.......	2,285	40.5	24.8
1869.......	2,289	47.5	21.1
1870.......	2,362	46.0	21.7
1871.......	2,336	46.5	21.5
1872......	2,537	42.9	23.2
1873.......	2,630	41.3	24.2
1874.......	2,541	50.8	19.6
1875.......	2,485	52.0	19.2
1876.......	2,253	57.3	17.5
1877......	2,282	56.6	17.7
1878.......	2,324	55.7	17.9
1879.......	2,396	57.8	17.5
1880.......	2,769	49.9	20.0
1881.......	2,750	50.3	19.9
1882.......	2,634	52.5	19.0
1883.......	2,611	54.4	18.3
1884.......	2,558	58.1	17.2
1885.......	2,488	61.3	16.3
1886.......	2,750	56.5	17.7
1887.......	2,839	55.8	18.0
Annual Average...		50.5	19.8

SEASON.

The following Table will show the number and percentage of marriages in Rhode Island, in each quarter of the year 1887, together with the aggregate number and percentage in each quarter for thirty-two years, viz., from 1854 to 1885, inclusive :

TABLE XXXI.

MONTHS.	Number of Marriages each month.	Number of Marriages each Quarter, 1887.	Percentage of each Quar. to total Marriages, 1887.	Number of Marriages per Quarter, 32 yrs., 1854-1885.	Perc'tage each Quarter, 32 years.
January	288	1st Quarter .. 637	22.43	1st Quarter...15,073	22.20
February	227				
March	122				
April	214	2d Quarter... 716	25.22	2d Quarter...16,921	24.92
May	233				
June	269				
July	201	3d Quarter... 669	23.56	3d Quarter...15,801	23.27
August	191				
September	277				
October	302	4th Quarter .. 817	28.79	4th Quarter..20,099	29.61
November	331				
December	184				
Entire year	....	2,839	100.00	67,894	100.00

The largest number of marriages, in any one month during 1887, occurred in the month of November. This is in accordance with the rule for thirty-four years.

There was an agreement with the rule, also, in the proportions of the number of marriages, in the different quarters of the year, to the whole number during the year. The rule has been as follows: The largest proportion in the last quarter; the next largest in the second quarter; followed by the third quarter; and, finally, the first quarter having the smallest proportion.

During 1887 the proportions in the different quarters, from the largest to the smallest, were as follows: Last quarter, 28.79 per cent.; second quarter, 25.22 per cent.; third quarter, 23.56 per cent.; first quarter, 22.43 per cent.

NATIVITY OF PERSONS MARRIED.

The following Table shows the *number* of marriages, according to the nativities of the parties, for each of the last five years, and also for the aggregate of five years, from 1878 to 1882, inclusive, and of twenty years, from 1858 to 1877, inclusive:

TABLE XXXII.

BIRTH-PLACE.	1887.	1886.	1885.	1884.	1883.	5 years, 1878–1882. Total.	20 years, 1858–1877. Total.
United States	1,465	1,480	1,374	1,410	1.428	7,878	25,674
Foreign countries	808	739	677	668	709	2,790	10,963
American groom, foreign bride	303	290	236	257	237	1.078	2,410
Foreign groom, American bride	263	241	201	223	237	1,126	2,750
Not stated	......	......	......	......	......	....	64
Total	2.839	2,750	2.488	2,558	2.611	12,873	41.861

There was an increase in the *number* of marriages, in 1887, in every class of nativity, over any year since 1882, and over any previous year in all classes except that of which both were natives of the United States.

It will be understood that in the above enumeration the parentage of the persons married is not considered, but the country where born, and not whether of native or foreign born parents.

In the following Table are given the *percentages* of American, foreign and mixed marriages, in each of the last five years, and in the aggregate of five years, 1878 to 1882, inclusive, and of twenty years, 1858 to 1877, inclusive:

TABLE XXXIII.

BIRTH-PLACE.	1887.	1886.	1885.	1884.	1883.	5 years, 1878–1882.	20 years, 1858–1877.
United States	51.60	53.81	55.22	55.12	54.69	61.25	61.38
Foreign countries	28.46	26.87	27.21	26.12	27.15	21.63	26.19
Mixed	19.94	19.32	17.57	18.76	18.16	17.12	12.48
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

It will be seen, in Table XXXIII, that the proportions of the different classes of persons married, to the whole number of marriages, follows closely the absolute numbers given in Table XXXII. It will also be noticed that the proportion of those born in the United States (although largely of foreign born parents) is smaller than in any other year since 1857, and unquestionably smaller than in any year since the commencement of registration.

AGES OF PERSONS MARRIED.

The following Table will show the number of grooms who were married, in 1887, to brides in the same age period of life, or in age periods earlier or more advanced:

TABLE XXXIV.

AGES OF GROOMS	AGES OF BRIDES.													Number of Grooms.
	Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	
Under 20	30	16	1	....	....	....	....	....	....	....	....	....	....	47
20 to 25	307	618	106	17	2	4	....	....	....	....	....	....	....	1,054
25 to 30	98	450	306	42	7	2	....	....	....	....	....	....	....	905
30 to 35	14	106	134	82	24	5	2	1	....	....	....	....	....	368
35 to 40	3	48	61	44	26	3	2	1	....	....	....	....	....	188
40 to 45	2	9	20	26	15	19	5	1	....	....	....	....	....	97
45 to 50	....	3	13	18	17	20	8	....	....	....	....	....	....	79
50 to 55	....	2	2	6	7	7	4	5	....	....	....	....	....	33
55 to 60	....	1	3	1	5	1	8	2	2	1	....	....	....	24
60 to 65	....	1	....	2	2	3	3	4	4	1	....	....	....	20
65 to 70	....	....	1	....	1	1	3	2	5	....	2	....	....	15
70 to 75	....	....	....	1	....	....	....	....	3	1	1	....	1	7
75 to 80	....	....	....	....	....	....	....	....	1	....	1	....	....	2
Number of Brides	454	1,254	647	239	106	65	35	16	15	3	4	....	1	2,839

The same results, in relation to numbers only, in the different age periods, may be presented in a different and perhaps clearer way as follows:

TABLE XXXV.

1887.	Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	Not stated.
Males.............	47	1,054	905	368	188	97	79	33	24	20	15	7	2	....	....	....
Females...........	454	1,254	647	239	106	65	35	16	15	3	4	...	1	...	....	....
Total persons	501	2,308	1,552	607	294	162	114	49	39	23	19	7	3	....	....	....

In Table XXXIV, as among the curiosities of matrimonial alliances, may be found the record of four grooms, aged from 20 to 25, who took brides aged from 40 to 45, and one groom of from 30 to 35 whose spouse was from 50 to 55.

The whole number of persons in each division of ages, of both sexes, married in Rhode Island in each of the last twenty-two years, that is, from 1866 to 1887, inclusive, is presented in the following Table:

TABLE XXXVI.

YEARS.	Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	Not stated.
1866	693	1,931	1,025	419	213	127	81	59	25	21	12	1	....	....	....	23
1867	696	1,886	1,104	416	211	148	91	48	37	18	18	5	3	1	....	9
1868	644	1,835	1,050	432	219	133	82	61	30	29	11	8	4	....	....	32
1869	642	1,814	1,051	468	227	134	79	46	35	15	11	2	3	2	....	49
1870	744	1,883	1,084	415	216	159	86	64	26	24	12	3	2	....	....	6
1871	697	1,914	1,118	392	228	115	73	56	35	22	6	7	3	....	....	6
1872	786	2,073	1,182	434	237	131	81	61	43	21	13	6	1	....	....	5
1873	762	2.177	1.156	507	253	140	87	68	35	24	12	6	6	....	...	27
1874	770	1,992	1,179	459	268	159	101	52	36	39	8	9	1	...	....	9
1875	681	2,058	1,108	475	252	150	101	60	32	29	13	4	1	....	....	6
1876	691	1,741	1,041	450	224	154	80	53	27	19	12	1	2	....	....	9
1877	631	1,745	1,118	459	244	125	92	52	46	14	15	11	2	1	....	9
1878	618	1,832	1,123	441	259	162	74	49	39	20	17	2	4	....	....	8
1879	639	1,879	1,156	481	272	123	78	56	39	26	18	9	2	2	1	11
1880	688	2,301	1,262	556	329	163	91	65	33	27	15	3	3	1	....	1
1881	599	2,208	1,410	547	298	187	107	54	34	31	16	5	1	1	....	2
1882	498	2,125	1,377	563	301	161	102	57	36	27	11	5	3	2	....	...
1883	497	2,108	1,370	486	319	183	115	73	31	20	14	3	2	1	....	....
1884	484	2,027	1,289	569	307	152	114	64	48	30	23	6	3	...	....	....
1885	438	1,973	1,296	540	309	163	102	57	45	27	13	7	3	....	1	2
1886	505	2,133	1,552	603	283	174	103	73	24	26	18	5	1	....	....	....
1887	501	2,308	1,552	607	294	162	114	49	39	23	19	7	3	....	...	....

The following summary will show the number of persons married, the number of persons married under twenty years of age, and the percentages of marriages of persons under twenty years of age, during two periods of five years each, that is, from 1870 to 1874, inclusive, and from 1880 to 1884, inclusive, and during the years 1885 and 1886, and in 1887:

	Whole Number of persons married.	Number married under twenty years of age.	Percentage of persons married under twenty years of age.
1870 to 1874	24,812	3,759	15.2
1880 to 1884	26,644	2,766	10.4
1885-1886	10,476	943	9.0
1887	5,678	501	8.8

The proportion of persons, under twenty years of age, who were married during 1887, was 8.8 per cent. only of the whole number of persons married during the same year.

The lessening proportions of persons under twenty years of age, who assume the obligations of marriage, may also be shown by taking several years at random, as shown in the following exhibit:

Years	Married under 20 years of age.
1870	15.9 per cent. of the whole number.
1872	15.5 per cent. of the whole number.
1876	15.3 per cent. of the whole number.
1880	12.4 per cent. of the whole number.
1883	9.5 per cent. of the whole number.
1886	9.1 per cent. of the whole number.
1887	8.8 per cent. of the whole number.

PROPORTION OF SEX.

The following Table will show the percentages of GROOMS in each division of ages, in each of the last twenty-eight years:

TABLE XXXVII.

	YEARS.	Under 20.	20 to 25.	25 to 30.	30 to 40.	40 to 50.	50 & over.	Total.
GROOMS.	1860	5.0	42.8	26.9	16.3	5.7	3.3	100.0
	1861	4.6	44.5	25.4	15.5	5.8	4.2	100.0
	1862	4.2	37.8	27.9	18.3	5.9	5.9	100.0
	1863	3.5	38.0	29.6	17.2	5.8	5.9	100.0
	1864	4.3	38.8	27.3	17.9	7.4	4.3	100.0
	1865	3.5	37.0	28.4	18.9	7.5	4.7	100.0
	1866	5.3	40.9	27.0	16.4	6.3	4.1	100.0
	1867	4.3	40.1	27.9	16.8	6.8	4.1	100.0
	1868	4.1	39.9	28.2	17.1	6.1	4.6	100.0
	1869	4.3	39.6	27.7	18.5	6.1	3.8	100.0
	1870	4.8	40.4	28.1	16.0	6.4	4.3	100.0
	1871	5.3	40.1	28.9	16.5	4.9	4.3	100.0
	1872	4.3	41.3	28.2	16.6	5.2	4.4	100.0
	1873	3.8	42.4	26.7	17.0	6.0	4.1	100.0
	1874	4.1	40.4	27.2	17.5	6.4	4.4	100.0
	1875	3.5	40.9	27.8	17.6	6.1	4.2	100.0
	1876	5.1	37.5	28.6	17.9	5.6	4.3	100.0
	1877	4.3	36.0	30.2	18.7	5.9	6.9	100.0
	1878	3.9	38.5	29.0	18.0	6.3	4.3	100 0
	1879	3.9	37.8	28.8	19.3	5.4	4.8	100.0
	1880	3.6	38.9	27.5	19.9	5.8	4.3	100.0
	1881	2.8	37.2	29.7	19.5	6.8	4.0	100.0
	1882	2.2	36.0	31.4	20.0	6.1	4.3	100 0
	1883	2.9	36.2	31.7	17.7	7.2	4.3	100.0
	1884	2.5	36.2	29.1	21.0	6.2	5.0	100.0
	1885	2.6	34.7	30.2	20.9	6.8	4.8	100.0
	1886	2.5	35.2	31.9	19.6	6.8	4.0	100.0
	1887	1.7	37.1	31.6	19.6	6.2	3.8	100.0

The following Table will show the percentages of BRIDES in each division of ages, in each of the last twenty-eight years:

TABLE XXXVIII.

	YEARS.	Under 20.	20 to 25.	25 to 30.	30 to 40.	40 to 50.	50 & over.	Total.
BRIDES.	1860	25.8	44.1	17.0	9.1	2.6	1.4	100.0
	1861	29.6	42.0	15.2	7.8	4.1	1.3	100 0
	1862	24.9	41.3	16.7	11.8	4.1	1.2	100.0
	1863	24.9	42.6	16.9	9.8	4.1	1.7	100 0
	1864	24.2	43.4	17.8	10.3	2.9	1.4	100.0
	1865	22.6	43.3	19.1	11.0	3.5	1.5	100.0
	1866	24.7	42.9	17.4	11.0	2.7	1 3	100.0
	1867	25.4	40.5	19.3	10.0	3.4	1.4	100.0
	1868	24.4	40.9	18.1	11.6	3.3	1.7	100.0
	1869	24.1	40.5	18.7	12.1	3 4	1.2	100 0
	1870	26.8	39.4	17.9	10.8	3.9	1.2	100.0
	1871	24.6	41.9	19.1	10.1	3.1	1.2	100.0
	1872	26.7	40.5	18.4	9.9	2.2	1.3	100.0
	1873	25.3	40.8	17.5	12.0	2.7	1.7	100.0
	1874	26.3	38.1	19.3	11.1	3.9	1.3	100.0
	1875	23.9	42.1	16.8	11.8	4.0	1.4	100 0
	1876	25.6	39.8	17.6	12.0	3.7	1.3	100.0
	1877	23.4	40.4	18.8	12.1	3.6	1.7	100.0
	1878	22.7	40.4	19.3	12.2	3.8	1.6	100 0
	1879	22.8	40.7	19.4	12.1	3.0	2.0	100.0
	1880	21.1	44.2	18.0	12.0	3.3	1.4	100.0
	1881	19.0	43.0	21.5	11.2	3.8	1.5	100.0
	1882	16.7	44.8	20.9	12.6	3.9	1.1	100.0
	1883	16.2	44.2	20.6	13.2	4.3	1.5	100.0
	1884	16.4	43.0	21.3	13.2	4.2	1.9	100.0
	1885	14.9	44.6	21.8	13.2	3.8	1.7	100.0
	1886	15.8	42.4	24.5	12.5	3.3	1.5	100.0
	1887	15.9	44.1	22.8	12.1	3.5	1.6	100.0

It will be noticed, in the preceding Tables, that the proportions of persons married of both sexes, under twenty years of age, have largely decreased during the last two decades.

Of males, the proportion has decreased about 40 per cent., and of females about 30 per cent.

The proportion of males married, between the ages of twenty and twenty-five, has decreased about 12 per cent., and has correspondingly increased in the more advanced age periods.

The proportion of females married, between twenty and twenty-five years of age, has continued about the same, while of those between twenty-five and forty there has been an increase of proportion similar to that of males.

NUMBER OF TIMES MARRIED.

There will be found in the following Table the number of grooms and of brides who were married for the first, second, third, etc., time, in 1887:

Table XXXIX.

	First Marriage.	Second Marriage.	Third Marriage.	Fourth Marriage.	Fifth Marriage.	Total.
Grooms	2,192	598	44	5	....	2,839
Brides	2,549	264	24	2	....	2,839

The proportion of *grooms* married for the first time, in 1887, was 77.2 per cent. of the whole number, and the proportion of *brides* married for the first time was 89.8 per cent.

The following Table will show not only the number of times each of the parties were married, but also the number of bachelors and widowers who married spinsters, the number who married widows of first or second widowhood, and of spinsters and widows who married bachelors, and widowers of the second, third or fourth marriage:

Table XL.

GROOMS.	BRIDES.					Total, Grooms.
	First.	Second.	Third.	Fourth.	Fifth.	
First marriage	2,163	23	6	....	....	2,192
Second marriage	358	225	13	2	....	598
Third marriage	26	13	5	....	....	44
Fourth Marriage	2	3	....	....	....	5
Fifth marriage	....	....	....	....	....	....
Total, Brides	2,549	264	24	2	....	2,839

It will be seen, by Table XL, that 29 bachelors married widows, 6 of whom married brides that had been twice widowed. Of the 647 widowers who married in 1887, 358 married spinsters, and 289 married widows. Of the widows who married widowers, 18 had been twice married previously, and two were married for the fourth time.

MARRIAGES OF PERSONS OF COLOR.

The number of marriages of persons of color, in Rhode Island, in 1887, was 97. This includes seven marriages in which one of the parties was white. The number and color of the individuals were, therefore, 187 persons of color and 7 persons white. The white persons were females. The marriages, however, may be properly classed as colored marriages, inasmuch as the offspring of such marriages are persons of color.

The number reported during 1887, from the different towns, was as follows, viz.:

Providence (including seven white brides)	75
Newport City	13
South Kingstown	5
Warwick	2
Barrington, East Greenwich. } each 1	2
Total	97

MARRIAGES OF THE DIVORCED.

The following Table will give the names of the towns from which returns of marriage with the facts of divorce were reported, during 1887, the whole number of divorced persons married, also whether the second or third marriage of the divorced groom or bride, and number of re-marriages of same persons:

Table XLI.

TOWNS.	Whole Number.	Groom.	Bride.	Second Marriage of Groom.	Third Marriage of Groom.	Second Marriage of Bride.	Third Marriage of Bride.	Remarriages, Same Parties.
Providence City	103	44	59	44	......	59	......	......
Woonsocket	9	2	7	2	......	6	1	......
Westerly	2	1	1	......	1	1	......	......
Coventry	1	......	1	......	......	1	......	......
Total State	115	47	68	46	1	67	1	......

DIVORCES, 1887.

According to the returns made to the Secretary of the State Board of Health, by the clerks of the Supreme Courts of the different counties in Rhode Island, the number of applications for divorce, during 1887, was three hundred and twenty-two (322).

The number of divorces granted, during 1887, was two hundred and forty-eight (248).

There were fourteen less applications, during 1887, than during the preceding year, and the number of divorces granted was nine less.

Divorces are decreed for the following seven statute causes, viz.:

1. Adultery.

2. Extreme cruelty.

3. Wilful desertion for five years of either of the parties, or for a shorter period, in the discretion of the court.

4. Continued drunkenness.

5. Neglect or refusal to provide necessaries (having ability) for the subsistence of a wife.

6. Gross misbehavior and wickedness other than aforesaid.

7. Impotency.

Divorces are also decreed, in the discretion of the court, for ascertained affinity, consanguinity, idiocy, insanity, penitentiary crimes, and illegal marriage.

The following Table shows the number of applications for divorce, and the number granted, in 1887, in each county of the State; also the causes alleged for the applications:

TABLE XLII.

COUNTIES.	Number of Applications.	Number Granted.	CAUSES ALLEGED.								Total Causes Alleged.
			Adultery.	Extreme Cruelty.	Willful Desertion.	Continued Drunkenness.	Neglect to Provide Necessaries, &c.	Other Gross Misbehavior.	Insanity at time of Marriage.	Illegal Marriage.	
Bristol	3	1	......	1	1	1	......	......	......	......	3
Kent	32	23	1	2	17	3	28	......	......	......	51
Newport	10	13	5	......	4	......	1	......	......	......	10
Providence	249	187	44	81	136	76	165	33	......	1	536
Washington	28	24	4	2	18	18	18	18	.....	......	78
Whole State	322	248	54	86	176	98	212	51	......	1	678

There were, during the year 1887, three hundred and twenty-two (322) applications for divorce, and the whole number of causes alleged was six hundred and seventy-eight (678). There were, therefore, an average of a fraction more than two causes alleged in each application. That average is not far from the rule of many years.

The causes alleged why divorce should be granted, in the applications during 1887, were 20 more in number than in 1886.

In order to show the actual number of applications, and the number of divorces granted in each of the last fifteen years, the following summary is presented :

	Applications for Divorce.	Divorces Granted.	Applications refused or continued or withdrawn.
1873	261	173	88
1874	276	242	34
1875	227	158	69
1876	254	196	58
1877	257	178	79
1878	258	196	58
1879	255	246	9
1880	347	273	74
1881	350	268	82
1882	339	271	68
1883	321	257	64
1884	320	266	54
1885	293	227	66
1886	336	257	70
1887	322	248	74
15 years, total	4,416	3,456	960

During the last fifteen years the proportion of decrees of divorce, to whole number of applications, was 78.7 per cent. During 1883 it was 80 per cent., during 1884 it was 83.0 per cent., during 1885 it was 78.5 per cent., during 1886 it was 76.5 per cent., and during 1887 it was 77 per cent.

The proportion of *divorces granted*, in 1887, to the whole number of marriages during the same year, was *one divorce* to every eleven and four-tenths marriages.

The proportion of *applications for divorce* to whole number of marriages, during the year, was one *application* to every eight and eight-tenths marriages.

The following Table shows the number of divorces granted in each county, and in the whole State, in each of the last nineteen years, and the proportion of marriages to each divorce granted in each year:

TABLE XLIII.

YEARS.	Bristol County.		Kent County.		Newport County.		Providence County.		Washington County.		Whole State.	
	Divorces Granted.	Marriages to one Divorce.	Divorces Granted.	Marriages to one Divorce.	Divorces Granted.	Marriages to one Divorce.	Divorces Granted.	Marriages to one Divorce.	Divorces Granted.	Marriages to one Divorce.	Divorces Granted.	Marriages to one Divorce.
1869	10	10.6	15	12.5	6	27.7	120	13.8	11	15.5	162	14.1
1870	3	27.7	18	11.8	6	26.3	152	11.3	21	9.3	200	11.8
1871	5	16.8	11	17.9	4	49.7	123	13.3	18	11.4	161	14.5
1872	8	10.2	13	15.7	8	22.9	149	12.6	22	8.9	200	12.7
1873	6	16.2	22	9.8	8	21.9	131	14.8	6	33.7	173	15.2
1874	10	8.9	20	8.0	6	29.0	190	10.0	16	11.6	242	10.5
1875	2	50.0	18	8.8	7	23.4	120	14.9	11	20.5	158	15.7
1876	6	14.5	15	12.8	7	20.5	148	11.1	20	8.8	190	11.5
1877	7	12.0	9	16.3	7	26.0	134	12.4	21	9.9	178	12.8
1878	4	26.0	11	13.3	13	12.8	156	10.9	12	17.3	196	11.9
1879	5	18.8	19	9.0	7	24.1	195	9.1	20	9.7	246	9.7
1880	8	12.1	23	9.4	11	17.6	208	9.7	23	17.0	273	10.1
1881	6	20.1	26	7.3	10	16.9	207	10.0	19	11.0	268	10.4
1882	6	15.0	18	10.3	15	13.0	221	8.9	11	16.2	271	9.7
1883	6	15.8	15	11.5	9	21.2	214	9.2	13	13.3	257	10.2
1884	4	16.7	20	8.0	12	15.7	209	9.3	21	8.2	266	9.6
1885	3	23.0	9	18.6	17	11.2	186	10.1	12	15.0	227	11.0
1886	5	16.0	17	11.0	15	12.3	194	10.9	26	7.3	257	10.7
1887	1	75.0	23	8.0	13	13.4	187	11.8	24	7.9	248	11.4

The ratio of divorces granted in the entire State, during 1887, to the whole number of marriages during the same year, was one divorce to every eleven and four-tenths marriages, as previously stated.

During the ten years 1869 to 1878, inclusive, the ratio of divorce to number of marriages was one divorce to every thirteen; during the six years 1879 to 1884, inclusive, the ratio was one divorce to every nine and nine-tenths marriages.

The average of the last three years was one divorce to every eleven marriages.

The small proportion of only one case of divorce granted in Bristol county, in 1887, to every seventy-five marriages, is unprecedented in the State within the last twenty years. It contrasts strongly with

Washington county, with one divorce to every seven and nine-tenths marriages; and Kent county, with one divorce to every eight marriages, in the same year.

During the nineteen years 1869–1887 the average proportions of divorce to marriage, in the several counties and the State, have been as follows:

Bristol County	One divorce to every 21.3 marriages.
Kent County	One divorce to every 11.5 marriages.
Newport County	One divorce to every 21.3 marriages.
Providence County	One divorce to every 11.3 marriages.
Washington County	One divorce to every 13.3 marriages.
Whole State	One divorce to every 11.8 marriages.

The following Table will show the Number of Marriages to every Decree of Divorce, in five of the New England States, during the years from 1876 to 1887, inclusive:

TABLE XLIV.

STATES.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.
Rhode Island	11.5	12.8	11.9	9.7	10.1	10.4	9.7	10.2	9.6	11.0	10.7	11.4
Massachusetts	24.2	23.1	21.4	23.4	26.8	40.9	34.3	27.8	28.2	26.4	30.0	24.5
Connecticut	10.9	10.1	10.7	13.4	13.9	11.6	12.8	12.1	14.9	13.3	14.2	......
Vermont	16.0	15.0	14.0	21.0	20.0	16.0	17.8	16.4	......	......	20.0	......
New Hampshire	......	......	......	......	7.7	9.2	10.9	12.8	10.4	10.9	......	......

DEATHS, 1887.

The number of deaths registered in Rhode Island, during 1887, according to the returns made to the State Registrar, was six thousand, three hundred and forty (6,340).

This number is larger by 491 than that of the year 1886, and an increase of 951 over that of 1885. It is the largest ever recorded in the State.

The death rate (nineteen and nine-tenths in every 1,000 living persons) was about one and one-tenth in excess of that of the previous year, and about two and two-tenths in excess of the census year, 1885.

The following summary will show the death rates per 1,000 for each of the last six census years, in comparison with that of 1887:

1860.	1865.	1870.	1875.	1880.	1885.	1887.
15.4	18.4	14.9	16.7	17.5	17.7	19.9

On the following page will be found the death rates, by counties, for twenty-eight years:

TABLE XLV.

Death rates per 1,000 living, by counties, in each of twenty-eight years, from 1860 to 1887, inclusive; also the average rate of each period of five years each, from 1860 to 1884, inclusive, for the whole State.

YEARS.	Bristol.	Kent.	Newport.	Providence.	Washington.	State.	STATE. ANNUAL AVERAGE OF FIVE-YEAR PERIODS, 1860-1884.
1860	16.4	13.7	13.7	17.7	12.6	15.4	..16.5 per 1,000 living.
1861	18.9	17.5	16.9	16.9	14.1	16.8	
1862	13.8	14.6	13.1	15.1	10.6	14.3	
1863	13.0	13.0	27.5	18.9	10.5	18.1	
1864	20.2	18.1	19.6	18.5	12.8	18.1	
1865	22.8	16.1	17.5	19.2	14.2	18.4	..16.5 per 1,000 living.
1866	19.2	14.2	17.3	16.6	11.4	16.1	
1867	17.0	15.1	15.0	16.4	10.9	15.6	
1868	15.7	13.7	14.7	17.0	10.4	15.7	
1869	17 9	16.7	13.2	16.0	12.8	15.6	
1870	15.5	13.5	14.1	15.5	12.0	14.9	..17.2 per 1,000 living.
1871	16.3	17.5	12.2	15.9	12.3	15.4	
1872	21.1	16.1	14.5	21.2	14.7	19.1	
1873	18.4	13.8	19.0	22.0	15.1	20.2	
1874	14.7	13.2	10.8	17.7	13.7	16.3	
1875	14.9	14.9	13.5	17.5	15.5	16.7	..16.6 per 1,000 living.
1876	14.7	11.7	13.5	16.8	15.9	15.9	
1877	18.2	13.1	12.4	18.7	12.8	17.2	
1878	17.5	14.2	13.7	18.3	13.0	17.2	
1879	13.2	15.1	14.8	17.2	11.1	16.2	
1880	19.2	14.9	14.5	18.5	12.7	17.5	..18.0 per 1,000 living.
1881	17.9	16.5	15.7	19.3	11.9	18.1	
1882	16.5	15.3	17.2	19.7	11.0	18.4	
1883	17.7	14.6	17.7	20.8	9.8	19.1	
1884	17.7	17.1	14.5	17.8	12.6	16.9	
1885	16.3	16.4	14.5	18.5	14.0	17.7	
1886	19.2	17.5	15.0	19.2	15.0	18.8	
1887	18.2	15.5	15.1	21.1	15.5	19.9	

Annual average, twenty-five years.. 17.0 per 1,000 living.

SEX OF DECEDENTS.

Of the 6,340 persons whose deaths were returned, during the year 1887, 3,177 were males, and 3,163 were females; the ratio standing at 100.4 males to each 100 females, or 501 males and 499 females in every 1,000 decedents.

The following Table will show the number and proportion of males and females among the *decedents* in Rhode Island, during the ten years 1853 to 1862, inclusive; also in each of the twenty-five years from 1863 to 1887, inclusive, and for the entire period of thirty-five years:

TABLE XLVI.

DEATHS.

	Males.	Females.	Males to every 100 females.
10 years, 1853-1862	10,930	11,269	96.9
1863	1,621	1,586	102.2
1864	1,633	1,727	92.4
1865	1,686	1.719	98.1
1866	1,497	1,473	101.5
1867	1,442	1,447	99.7
1868	1,413	1,499	94.3
1869	1,696	1,686	100.6
1870	1,588	1,650	96.2
1871	1,621	1.723	94.1
1872	2,118	2,129	99.4
1873	2,166	2.237	95.5
1874	2.111	2,118	99.7
1875	2,108	2,209	95.4
1876	1,969	2,147	91.7
1877	2,132	2,318	92.0
1878	2,161	2,280	94.8
1879	2,183	2,289	95.4
1880	2,366	2,463	96.0
1881	2,367	2,559	96.8
1882	2,487	2,587	96.5
1883	2,627	2,655	99.0
1884	2,486	2,655	93.6
1885	2,607	2,782	93.7
1886	2,833	3,016	93.9
1887	3,177	3,163	100.4
35 years	63,125	65,376	96.6

The following Table of births, during the same period of time as the preceding, will show by comparison the different proportions of the sexes in the two classes of events :

TABLE XLVII.

BIRTHS.

	Males.	Females.	Males to every 100 females.
10 years, 1853-1862	18,377	17,260	106.4
1863	1,892	1,788	105.8
1864	1,949	1,942	100.3
1865	2,096	1,857	112.9
1866	2,546	2,356	108.1
1867	2,655	2,464	107.7
1868	2,745	2,627	104.5
1869	2,685	2,560	104.9
1870	2,679	2,536	105.6
1871	2,878	2,800	102.8
1872	3,085	3,058	100.9
1873	3,135	2,887	108.6
1874	3,311	3,155	104.9
1875	3,362	3,146	106.9
1876	3,291	3,038	108.3
1877	3,163	3,072	103.0
1878	3,402	3,312	102.7
1879	3,259	3,091	105.4
1880	3,241	3,054	106.1
1881	3,498	3,263	107.2
1882	3,509	3,316	105.8
1883	3,548	3,498	101.4
1884	3,713	3,592	103.4
1885	3,591	3,437	104.4
1886	3,897	3,724	104.6
1887	3,968	3,700	107.2
35 years	95,475	92,533	106.2

SEASON AND MORTALITY.

The whole number of decedents, and the sex of the same, in each month of the year 1887, and in each division of the State, may be found in Table VI, on the ninth page.

The influence of season upon mortality may be further illustrated by the following Table, which shows the number and percentage of deaths in each quarter of each of the last four years, and in the aggregate for thirty-five years, 1853 to 1887, inclusive:

TABLE XLVIII.

SEASONS.	1887.		1886.		1885.		1884.		1853–1883.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
January-March	1,448	22.84	1,413	24.16	1,433	26.59	1,111	21.61	24,814	23.46
April-June	1,412	22.27	1,297	22.17	1,237	22.95	1,111	21.61	22,239	21.02
July-September	1,887	29.76	1,745	29.83	1,575	29.22	1,512	29.41	30,457	28.79
October-December	1,593	25.13	1,394	23.84	1,144	21.24	1,407	27.37	28,272	26.73
Total	6,340	100.00	5,849	100.00	5,389	100.00	5,141	100.00	105,782	100.00

In 1887 the proportions vary somewhat from those of the average of thirty-one years. The first and last quarters are smaller, the first by about six-tenths per cent., and the last by one and six-tenths per cent. The second and third quarters, on the other hand, are larger by from one to one and two-tenths per cent. The mortality of 1886 shows a larger per cent. in the first quarter of the year, and a smaller in the last; about two per cent. in both directions.

TABLE XLIX.

Showing the months in the order of largest mortality, for eight years.

1887.		1886.		1885.		1884.		1883.		1882.		1881.		1880.	
1. July	651	August	644	July	587	August	552	July	537	August	589	August	576	July	488
2. August	647	July	589	August	518	October	518	August	499	November	461	January	430	August	430
3. September	589	March	515	March	499	September	514	April	475	September	444	July	434	March	426
4. December	554	September	512	January	492	December	457	January	452	July	410	October	426	January	422
5. October	520	October	512	April	483	July	456	May	455	May	406	April	417	October	416
6. November	519	January	488	September	470	November	432	October	443	December	405	September	414	April	400
7. March	517	April	460	February	442	April	416	March	442	April	401	May	410	May	392
8. April	517	December	454	December	404	March	389	September	435	October	399	March	401	September	388
9. January	490	November	428	May	397	January	378	December	409	January	398	February	396	December	377
10. May	457	May	420	October	376	May	369	June	401	February	392	December	385	February	368
11. February	441	June	417	November	364	February	344	November	392	March	390	November	374	November	365
12. June	438	February	410	June	357	June	326	February	352	June	379	June	344	June	357
	6,340		5,849		5.389		5,141		5.282		5,074		5,016		4,829

PARENTAGE OF DECEDENTS.

The number of decedents, in 1887, of the two general classes of parentage, that is, American and foreign, may be found in Table I, on pages 2 and 3.

Of the whole number of decedents, 6,340, reported in 1887, 2,926 were of American, and 3,414 were of foreign parentage.

By the term "foreign parentage" is meant the decedents whose fathers were born in some other country and not in the United States. The grandchildren of foreign born grandfathers are reckoned as of American parentage, if their fathers were born in the United States.

The following six towns reported a larger number of decedents of foreign parentage than of American : Warwick, Cumberland, Lincoln, Pawtucket, Woonsocket, and Providence city; also the State Institutions in Cranston.

The six towns reporting a larger number of decedents of foreign parentage than of American, had the following proportions of the same:

Cranston (State Institutions)	163 of foreign parentage to each 100 of American.
Cumberland	180 of foreign parentage to each 100 of American.
Lincoln	349 of foreign parentage to each 100 of American.
Pawtucket	156 of foreign parentage to each 100 of American.
Woonsocket	382 of foreign parentage to each 100 of American.
Providence City	141 of foreign parentage to each 100 of American.
Warwick	91 of foreign parentage to each 100 of American.

The proportion of the decedents of foreign parentage was larger at the State Institutions and in Providence city, and smaller in all the other towns, than in the preceding year.

The following Table gives the number and proportion in every one thousand deaths of decedents of American and of foreign parentage, in each of the last five years; and in the aggregate for twenty-five years, or from 1858 to 1882, inclusive:

TABLE L.

PARENTAGE.	1887.		1886.		1885.		1884.		1883.		1858-1882.	
	Number.	Per 1,000.	Number.	Per 1,000.	Number.	Per 1,000.	Number.	Per 1,000.	Number.	Per 1,000.	Number.	Per 1,000.
American.......	2,926	461.5	2,747	469.7	2,765	513.8	2,485	483.4	2,652	502.1	59,760	553.6
Foreign.........	3,414	538.5	3,102	530.3	2,624	486.2	2,656	516.6	2,630	497.9	48,193	446.4
Total...........	6,340	1000.0	5,849	1000.0	5,389	1000.0	5,141	1000.0	5,282	1000.0	107,953	1000.0

AGE OF DECEDENTS.

In Table I, on pages 2 and 3, may be found the aggregate and average age of all the decedents whose deaths occurred in 1887, and with the age of each sex, in each town and county in the State.

By that Table it will be seen that the average age of all the male decedents in the State, in 1887, was 30.97 years, and that the average age of all the female decedents, in the same year, was 32.91 years; the average age of all decedents, of both sexes, 31.95 years.

The average age of all the decedents in the State, in 1887, was over two years less than the average for 1886.

The following Table will present, separately, the average age of the male and female decedents, and the average age of all decedents, in each year for twenty-eight years; also the average age in five periods of five years each, 1860-1884:

TABLE LI.

YEARS.	Average Age of Males.	Average Age of Females.	Average Age of All.	Average Age, 5-year periods, 1860-1884.
1860	28.51	30.70	29.64	29.71
1861	26.95	30.58	28.82	
1862	29.64	32.65	31.15	
1863	28.29	30.86	29.56	
1864	28.13	30.43	29.40	
1865	26.38	28.97	27.69	31.58
1866	31.13	35.07	33.09	
1867	32.16	35.86	34.01	
1868	30.47	35.08	32.85	
1869	28.62	31.29	30.25	
1870	31.02	32.75	31.90	30.30
1871	32.57	34.43	33.52	
1872	28.41	31.15	29.77	
1873	26.18	28.62	27.42	
1874	28.03	31.66	28.86	
1875	29.72	32.75	31.27	31.29
1876	31.47	33.21	32.37	
1877	29.25	31.56	30.45	
1878	29.02	31.11	30.09	
1879	31.29	33.24	32.29	
1880	29.62	32.06	30.86	33.24
1881	30.99	34.07	32.55	
1882	31.33	35.57	33.50	
1883	33.64	37.44	35.55	
1884	32.29	35.12	33.76	
1885	33.53	35.60	34.59	
1886	33.02	34.91	34.01	
1887	30.97	32.91	31.95	

The above Table shows that the average longevity of the decedents in Rhode Island increased over three years, during a period of twenty-five years, ending with 1884.

The following Table will present some of the facts of the preceding as occurring in the different divisions of the State, instead of the State at large. It will show the average age of the decedents in each of the larger divisions of the State, in each of the last five years, and also the average of each of five periods of five years each, comprising the twenty-five years from 1858 to 1882, inclusive:

TABLE LII.

DIVISIONS OF THE STATE.	1887.	1886.	1885.	1884.	1883.	1878–1882, 5 years.	1873–1877, 5 years.	1868–1872, 5 years.	1863–1867, 5 years.	1858–1862, 5 years.
Bristol County....	33.20	40.04	42.14	37.62	39.24	36.68	33.61	35.12	34.78	35.56
Kent County..................	39.15	33.83	34.78	39.21	41.36	37.11	36.20	34.77	35.81	32.15
Newport County....	37.15	50.00	44.08	40.20	40.66	39.21	40.68	40.04	33.54	35.01
* Providence County...........	29.60	30.07	32.41	32.52	34.56	30.60	28.46	25.26	29.16	28.44
Providence City...............	30.00	32.45	33 81	31.51	33.18	29.50	27.19	25.45	28.50	25.78
Washington County.....	40.70	44.12	42.61	42.13	47.42	41.01	41.14	39.67	30.87	34.21
Whole State....	31.95	34.01	34.59	33.76	35.55	31.84	30.28	31.66	30.73	29.42

PERCENTAGE OF DECEDENTS BY DIFFERENT AGES.

In Table VI, on pages 10 to 15, inclusive, will be found the number of deaths in 1887, in each town and each county, of each sex, and in each period of life, with the percentage of the whole number of deaths in each division to the population of the same, as estimated by the authorities of each.

The following Table shows the percentages of decedents in each division of ages, to whole number of deaths, in each of the last six years, and in the aggregate for three periods; one of ten years and seven months, from June 1st, 1852, to December 31st, 1862, inclusive; one of ten years, from 1863 to 1872, inclusive; and one of ten years, from 1873 to 1882, inclusive:

---

* Including Pawtucket.

TABLE LIII.

PERIODS OF LIFE.	1887.	1886.	1885.	1884.	1883.	1882.	10 years, 1863 to 1782.	10 years, 1873 to 1882.	10 years, 7 months, 1852 to 1862.
Under 1 year...........	19.6	19.9	18.8	20.1	18.1	19.7	18.9	18.0	17.6
1 and under 2..........	6.6	5.3	5.2	5.6	5.1	5.3	7.6	7.8	9.8
2 and under 5	8.2	6.5	6.1	6.6	4.1	6.5	8.4	7.9	9.6
Total under 5..........	34.4	31.7	30.1	32.3	27.6	30.5	34.9	33.7	37.0
5 and under 10........	5.2	4.0	3.3	3.5	3.4	3.7	5.0	4.6	5.0
10 and under 20	5.1	5.5	5.6	4.8	5.4	5.8	5.8	6.2	5.8
20 and under 30........	7.6	8.7	8.6	9.2	10.3	10.6	9.2	9.7	9.5
30 and under 40	7.0	7.5	7.9	8.1	8.4	9.3	7.8	8.1	8.7
40 and under 50........	6.7	7.4	7.7	7.2	7.6	7.6	6.9	7.2	7.5
50 and under 60.... ...	8.0	8.1	8.1	8.1	9.0	7.3	7.2	7.3	6.7
60 and under 70.... ...	9.9	9.1	10.4	9.1	9.2	8.4	8.2	8.3	6.9
70 and under 80........	9.2	10.6	10.4	9 5	10.5	9.7	8.8	8.4	7.3
80 and under 90........	5.3	5.3	6.2	6.9	6.5	5.6	5.1	5.4	4.6
Over 90 and not stated..	1.6	2.1	1.7	1.3	2.1	1.5	1.1	1.1	1.0
Total.................	100.0	100.0	100.0	100 0	100.0	100.0	100 0	100.0	100.0

There was an increase in the proportional number of deaths in all the divisions of age under ten years, in the percentage to the whole number in 1887, except under one year. Under five years the percentage was two and seven-tenths *larger* than the year previous. But this proportion was eight-tenths *less* than the average of thirty years previous to 1883.

Above the age of ten years the proportionate mortality was somewhat smaller in nearly every period.

The rule for several years, however, has been an increased percentage of mortality in the divisions of age above fifty.

The following Table will present the varying proportions of deaths to whole number of deaths, in four different periods of life, from 50 years of age to 90 years, grouped in three periods of ten years each, and one period comprising the last five years, 1883–1887:

TABLE LIV.

AGE OF DECEDENTS.	1st Decade.	2d Decade.	3d Decade.	Last 5 Years.
50 to 60	6.7 per cent.	7.3 per cent.	7.2 per cent.	8.2 per cent.
60 to 70	6.9 "	8.3 "	8.2 "	9.5 "
70 to 80	7.3 "	8.4 "	8.8 "	10.0 "
80 to 90	4.6 "	5.4 "	5.1 "	6.0 "

It has been elsewhere observed that the natural result of a lessened proportion of deaths in the earlier periods of life would be a larger proportion of living persons in the later periods, and consequently an increased death rate, because of the larger proportional number liable to disease and other causes of death.

COLORED DECEDENTS.

The number of deaths of colored persons in Rhode Island, during 1887, was 203. They occurred in the different towns as follows :

Providence City		124
Newport City		26
South Kingstown		6
Bristol, Warwick.	5 each	10
East Greenwich, Pawtucket.	4 each	8
Cranston, Glocester.	3 each	6
Charlestown, Richmond.	2 each	4
Barrington, Warren, New Shoreham, Burrillville, East Providence, Johnston, Exeter, Hopkinton, North Kingstown, Westerly.	1 each	10
State Institutions		9
Total		203

Sex.—Of the decedents of color, 106 were males, and 97 were females.

Season.—The deaths were in the different months as follows:

Months.	Deaths.	Months.	Deaths.	Months.	Deaths.	Months.	Deaths.
January	21	April	19	July	23	October	15
February	11	May	22	August	15	November	15
March	19	June	16	September	15	December	12
	—		—		—		—
First Quarter	51	Second Quarter	57	Third Quarter	53	Fourth Quarter	42

First six months, 108; Second six months, 95; Total, 203.

The following summary will show the proportion, to the whole estimated colored population, of each of the events of birth, marriage and death of colored persons, during the ten years from 1878 to 1887, inclusive:

	One Birth in every	One Person married in every	One Death in every
1878	36.4	39.2	40.2
1879	39.6	51.4	37.3
1880	47.1	43.3	44.0
1881	34.3	39.2	35.4
1882	36.8	44.5	45.4
1883	33.4	63.3	39.7
1884	34.8	46.0	34.5
1885	36.7	51.7	40.1
1886	34.6	43.2	37.8
1887	35.8	38.9	37.2

In every one thousand of the colored population there were, in 1887,

Of Births.	Married.	Of Deaths.
27.9	25.7	26.9

The following exhibit will show the number of births, marriages and deaths among the colored population of Rhode Island, during 10 years, from 1861 to 1870, inclusive; 10 years, from 1871 to 1880, inclusive; and for the last seven years, from 1880 to 1887, inclusive, as well as the aggregate of the same:

10 years, 1861–1870	1,131 births	557 marriages	1,153 deaths.
10 years, 1871–1880	1,615 births	705 marriages	1,573 deaths.
1881	192 births	84 marriages	186 deaths.
1882	179 births	74 marriages	145 deaths.
1883	197 births	52 marriages	166 deaths.
1884	185 births	70 marriages	187 deaths.
1885	199 births	69 marriages	183 deaths.
1886	212 births	85 marriages	198 deaths.
1887	211 births	97 marriages	203 deaths.
Last 7 years	1,375 births	531 marriages	1,268 deaths.
Total, 27 years	4,121 births	1,793 marriages	3,994 deaths.

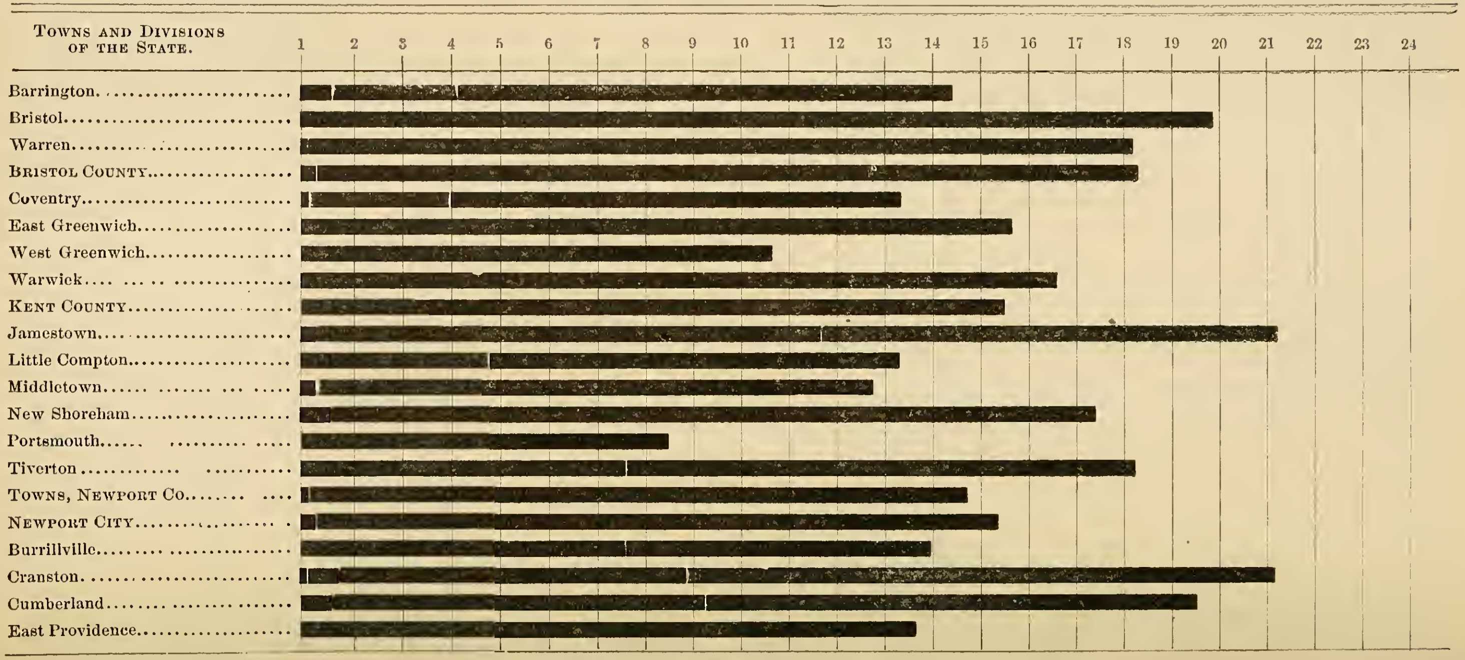
Excess of births over deaths during the twenty-seven years 127

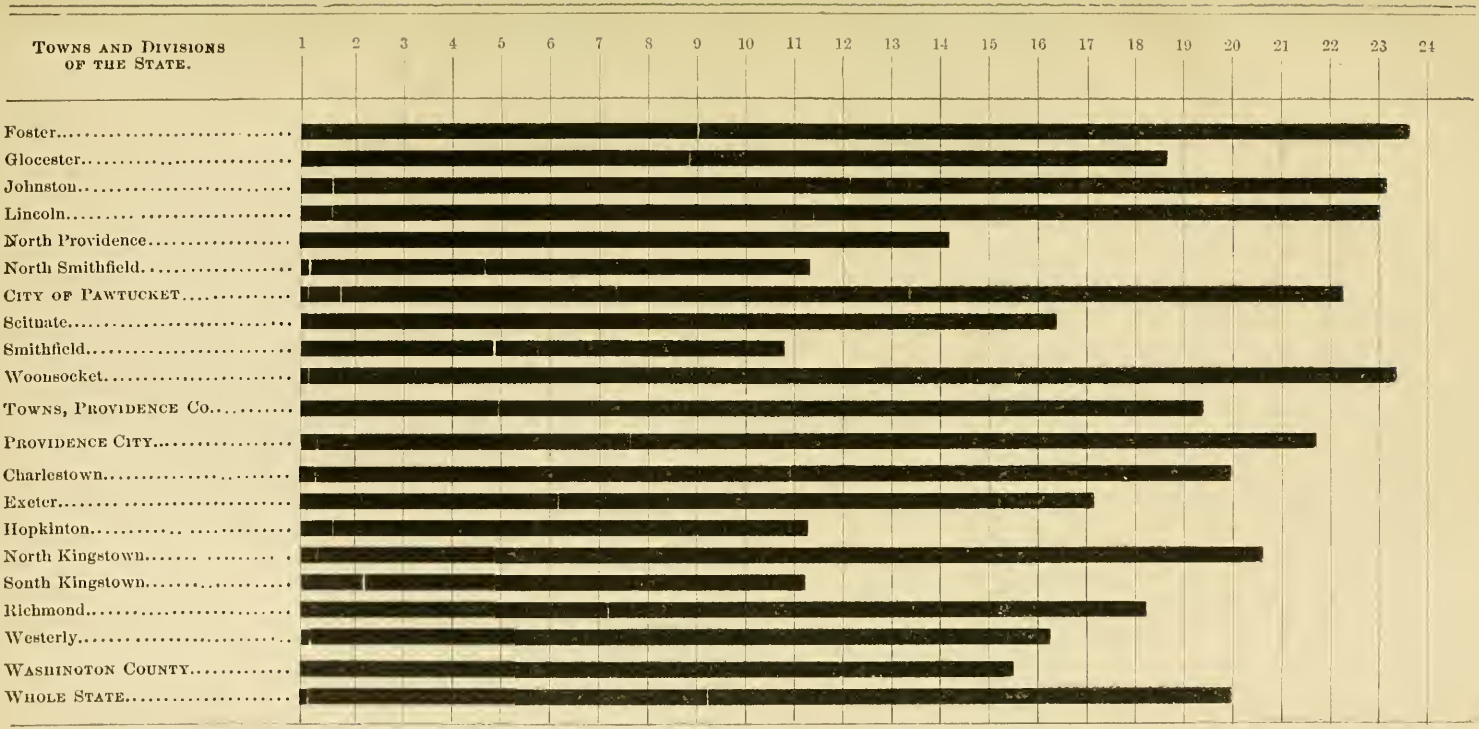
During the first ten years (1861–1870) there were twenty-four more deaths than births; during the second ten (1871–1880) forty-two more births than deaths; during the last seven years (1881–1887) one hundred and seven more births than deaths. For the whole twenty-seven years there was an average excess of less than five births a year.

DEATH RATES.

Diagram II.—Showing the number of deaths in every 1000 of the population, in each town and each county in the State during the year 1837, computed upon the population as estimated by the town authorities.

For explanation see foot note on next page.





The figures at the top of the perpendicular lines indicate, in whole numbers, the number of deaths during the year in every 1000 persons. The spaces are fractional parts of one. For instance, the heavy horizontal line against Barrington, at the top of this diagram, reaches across about four-tenths of the space between the perpendicular lines 14 and 15. It shows the death rate of Barrington, in 1887, was about fourteen and four-tenths in every 1000 of the population, according to estimation.

CAUSES OF DEATH, 1887.

The statistics of the causes of death in Rhode Island, in 1887, may be found in Tables VII, VIII, IX and XI. The whole number of deaths, as previously stated, was 6,340. The number of which the cause of death was reported was 6,321, and the number of which the cause was not stated was 19.

The following Table shows the number of deaths in 1887, in each large division of the State, and the number and proportion in each division from which causes were reported unknown :

TABLE LV.

1887.	Bristol County.	Kent County.	Newport County Towns.	Providence County Towns.	Washington County.	Newport City.	Providence City.	Pawtucket.	Whole State.
Number of Deaths	212	343	128	1,795	351	313	2,640	553	6,340
Cause not stated	......	......	2	....	......	4	10	3	19
One in	......	......	64.0	....	......	78.2	264.0	188 0	333.7

TABLE LVI.

Showing the proportion of Deaths reported, with "Cause Unknown," in each division of the State, and in the whole State, in each of the last twenty-five years, from 1863 to 1887, inclusive.

YEARS.	Bristol County.	Kent County.	Newport County.	Providence County Towns.	Providence City.	Washington County.	Whole State.
1863, One in every	16.5	11.2	25.5	6.9	46.7	24.7	14.7
1864, One in every	57.0	12.6	11.6	8.5	45.7	47.6	16.1
1865, One in every	64.3	27.4	13.4	8.2	55.0	32.9	16.4
1866, One in every	163.0	11.4	22.4	9.5	45.0	23.3	17.3
1867, One in every	....	13.6	34.5	7.4	64.0	14.3	14.8
1868, One in every	32.3	5.0	20.3	5.2	46.2	10.1	10.1
1869, One in every	41.2	5.8	52.8	5.3	83.6	16.1	11.3
1870, One in every	....	19.3	23.6	11.8	90.2	26.9	23.6
1871, One in every	151.0	81.2	7.9	8.4	83.6	9.8	13.0
1872, One in every	13.3	5.8	10.0	6.8	72.8	9.8	11.3
1873, One in every	....	16.0	25.4	9.8	102.5	27.5	20.3
1874, One in every	54.0	15.2	14.0	17.2	73.7	21.2	27.8
1875, One in every	55.0	7.4	15.6	13.7	91.2	11.9	20.9
1876, One in every	11.5	7.9	18.5	9.9	124.3	22.8	19.3
1877, One in every	....	17.7	9.7	11.9	323.0	16.0	23.2
1878, One in every	32.1	7.4	9.0	13.7	124.2	21.7	21.1
1879, One in every	16.6	9.2	12.4	9.5	225.1	8.6	17.6
1880, One in every	21.9	23.5	13.5	10.5	122.3	17.8	20.7
1881, One in every	204.0	13.0	11.2	7.3	143.0	6.5	14.4
1882, One in every	37.6	11.6	10.9	10.6	187.0	7.7	18.8
1883, One in every	40.4	15.9	15.0	15.3	392.8	17.0	28.4
1884, One in every	100.0	40.0	81.6	91.7	372.1	94.0	122.4
1885, One in every	....	....	137.0	45.6	309.1	52.2	91.3
1886, One in every	110.5	192.5	86.0	87.0	195.1	55.2	113.7
1887, One in every	....	....	73.5	782.6	264.0	....	333.7

The average annual proportion of deaths in the whole State, reported with cause unknown during the first ten of the above twenty-four years, that is, from 1863 to 1872, inclusive, was one in every 14.8; or 67.6 in every one thousand decedents.

The average annual proportion of the same for the last four years was one in every 132.8, or less than 7.5 in every one thousand decedents, showing great improvement in the complete filling out of the returns.

TABLE LVII.

Showing the Order in regard to Number and Proportion of Decedents from Thirteen Principal Causes of Death.

1887.	1886.	1885.	1884.	1883.	1882.	June 1st, 1852, to Dec. 31st, 1882—30 yrs. 7 mos.	Per 1000 of whole No. of deaths, 30 years, 7 months.
Whole Number....6,340	Whole Number....5,849	Whole Number....5,389	Whole Number....5,141	Whole Number....5,282	Whole Number....5,074	Whole Number. 101,230	
Consumption........710	Consumption........826	Consumption........781	Consumption........739	Consumption........766	Consumption........737	Consumption.....16,025	158.3
Pneumonia and Conges. of Lungs..488	Pneumonia and Conges. of Lungs..481	Pneumonia and Conges. of Lungs..467	Pneumonia and Conges. of Lungs..363	Pneumonia and Conges. of Lungs..400	Pneumonia and Conges. of Lungs..344	Pneumonia and Conges. of Lungs 6,099	60.2
Brain, Diseases of...440	Cholera Infantum...377	Heart, Diseases of...319	Cholera Infantum...325	Heart, Diseases of...325	Cholera Infantum...325	Old Age 5,408	53.4
Heart, Diseases of...406	Apoplexy and Paralysis..........333	Apoplexy and Paralysis 289	Apoplexy and Paralysis 298	Apoplexy and Paralysis 275	Old Age.... 283	Cholera Infantum.5,143	50.8
Cholera Infantum...355	Heart, Diseases of...330	Cholera Infantum...279	Old Age.... 293	Old Age.... 275	Apoplexy and Paralysis..........265	Scarlatina..........4,398	43.4
Apoplexy and Paralysis..........328	Old Age........ 276	Old Age.... 267	Heart, Diseases of...285	Fevers, Typhoid, &c 258	Heart, Diseases of...255	Dysentery and Diarrhœa........4,310	41.5
Diphtheria..........287	Diphtheria..........228	Brain, Diseases of...189	Diarrhœa and Dysentery.........194	Cholera Infantum...242	Fevers, Typhoid, &c.......... ...229	Heart, Diseases of.3,947	39.0
Old Age.............278	Accidents 189	Cancers.............193	Accidents..........180	Diarrhœa and Dysentery.........184	Brain, Diseases of...173	Fevers, Typhoid, &c. 3,755	37.1
Scarlatina...........266	Brain, Diseases of...182	Accidents 173	Fevers, Typhoid, &c...............165	Brain, Diseases of...179	Accidents...........166	Apoplexy and Paralysis 3,527	34.8
Accidents...........206	Bronchitis ... .174	Fevers.......... ...158	Cancers.... 156	Cancers.... 169	Dysentery and Diarrhœa..... 158	Accidents (all kinds)..........3,018	30.8
Bronchitis...........176	Fevers........ 169	Diarrhœa and Dysentery.........120	Brain, Diseases of...148	Accidents...........155	Cancers.............132	Diphtheria*.......2,949	*29.1
Kidney, Diseases of .169	Cancers.............162	Diphtheria.......... 99	Convulsions.........139	Convulsions...... .126	Convulsions. 121	Convulsions and Fits.............2,203	21.7
Cancers 159	Kidneys, Disease of .155	Scarlet Fever 91	Diphtheria..........119	Diphtheria 95	Diphtheria 101	Croup..... 2,013	19.8

* 25 years, 1858 to 1882, inclusive.

The decrease in the number of decedents from consumption, 116, from the previous year, is quite unprecedented. The whole number is smaller than in any year since 1881, and this smaller number notwithstanding the regular increase of population.

Consumption is a disease conspicuously uniform in its regular proportion of mortality to the whole number of deaths, and to population. It seldom goes backward in the annual number of its victims, while the population goes forward.

Bronchitis, as a cause of death, was scarcely more prominent than in the previous two years, the decedents having been respectively, for the three years, 168, 174, 176.

Pneumonia had seven decedents only in excess of 1886; and thirteen only in excess of 1885. The decedents from diseases of the respiratory organs, in 1887, numbered 1,374, and composed about 21 per cent. of the whole mortality; whereas in 1886 they composed more than 25 per cent. of the whole mortality for that year.

It will be seen, by the following Table, that malarial fevers have been given a separate representation in the lists of fatal diseases. The increased number of decedents from malarial diseases for the last three or four years, warrants separate notice and consideration. Malarial fevers have been heretofore included with other fevers, and classed as Fevers Typhoid, etc.

Scarlatina had a much larger mortality than in any year since 1880, when it prevailed so largely in Providence city. Woonsocket contributed the larger part of the increase.

TABLE LVIII.

A summary of Deaths in Rhode Island in 1887, from twenty-two leading causes, showing the Number, Sex, Parentage, Season, Ages and Localities.

		Accidents.	Apoplexy and Paralysis.	Brain, Diseases of.	Bronchitis.	Cancer.	Cholera Infantum.	Consumption.	Croup.	Diarrhœa.	Diphtheria.	Dysentery.	Fevers, Malarial.	Fevers, Typhoid, &c.	Heart, Diseases of.	Hooping Cough.	Kidneys, Diseases of.	Liver, Diseases of.	Measles.	Old Age.	Pneumonia and Congestion of Lungs.	Scarlatina.	Stomach, Diseases of.
Number of decedents from each cause		206	328	440	176	159	355	710	113	133	287	66	85	127	406	21	169	86	132	278	488	266	68
SEX.	Males	158	161	247	90	49	200	312	58	77	135	30	50	67	205	9	92	40	69	103	260	120	28
	Females	48	167	193	86	110	155	398	55	56	152	36	35	60	201	12	77	46	63	175	228	146	40
PAR'AGE.	American	92	213	218	60	96	145	266	43	44	101	26	29	58	240	10	90	38	57	167	227	95	29
	Foreign	114	115	222	116	63	210	444	70	89	186	40	56	69	166	11	79	48	75	111	261	171	38
SEASON.	January	11	21	34	22	16	2	65	5	5	28	2	1	11	32	1	13	9	8	25	58	12	2
	February	8	30	41	16	10	4	57	7	4	13	1	2	6	39	....	9	9	14	16	60	5	5
	March	15	37	37	26	10	2	59	6	2	7	1	1	6	30	3	14	5	26	25	90	6	1
	April	11	29	48	14	15	1	74	7	6	8	2	3	4	29	3	18	5	42	23	67	3	3
	May	12	19	33	15	7	4	62	6	8	20	2	7	7	34	....	12	5	19	16	47	6	11
	June	22	27	35	17	9	13	57	6	5	19	2	8	6	41	....	11	2	7	23	26	5	6
	July	39	24	40	8	25	132	47	5	29	21	17	5	8	33	4	13	5	8	25	14	12	6
	August	24	26	39	3	16	101	62	8	29	21	20	15	18	37	2	21	10	4	32	10	13	7
	September	16	21	34	13	14	66	59	9	18	35	13	18	18	39	2	18	8	2	34	17	28	5
	October	14	38	35	9	5	22	58	18	16	44	4	12	19	29	3	8	9	2	12	22	53	14
	November	19	31	28	14	13	5	55	17	7	39	2	8	11	29	1	18	9	....	25	36	58	4
	December	15	25	36	19	19	3	55	19	4	32	....	5	13	34	2	14	10	....	22	41	65	4

TABLE LVIII.—Continued.

A summary of Deaths in Rhode Island in 1887, from twenty-two leading causes, showing the Number, Sex, Parentage, Season, Ages and Localities.

		Accidents.	Apoplexy and Paralysis.	Brain, Diseases of.	Bronchitis.	Cancer.	Cholera Infantum.	Consumption.	Croup.	Diarrhœa.	Diphtheria.	Dysentery.	Fevers, Malarial.	Fevers, Typhoid, &c.	Heart, Diseases of.	Hooping Cough.	Kidneys, Diseases of.	Liver, Diseases of.	Measles.	Old Age.	Pneumonia and Congestion of Lungs.	Scarlatina.	Stomach, Diseases of.
AGES.	Under 5 years	36	8	317	88	1	355	26	94	75	181	30	20	11	22	20	3	7	119	....	132	166	17
	5 and under 10	11	1	33	2	..	...	9	17	3	82	1	7	13	8	1	4	2	9	...	15	82	1
	10 " " 15	19	1	10	1	1	....	20	....	....	13	1	4	8	11	...	4	...	1	...	7	12	....
	15 " " 20	5	2	8	4	1	...	78	....	....	7	....	5	16	11	....	2	1	1	...	7	4	1
	20 " " 30	27	6	11	9	2	....	189	...	5	3	2	8	31	30	....	15	3	....	...	32	2	5
	30 " " 40	27	13	10	6	18	...	149	1	4	...	4	6	16	23	....	21	5	1	...	43	...	3
	40 " " 50	20	26	8	5	20	....	89	...	4	1	3	4	10	35	....	26	16	....	...	51	....	3
	50 " " 60	17	50	9	18	50	...	55	....	7	...	8	8	5	61	...	37	11	1	....	56	...	15
	60 " " 70	19	90	9	20	29	...	54	...	14	..	5	12	8	79	...	28	29	...	9	64	....	10
	70 " " 80	14	96	15	15	26	...	29	...	12	....	5	7	4	87	....	24	10	....	71	53	...	6
	80 and over	7	35	9	8	11	...	7	....	9	....	7	4	4	39	....	5	2	....	198	28	..	7
	Not stated	4	....	1	...	...	....	5	1	...	....	....	....	1	...	...	...	..	....	...	....	...	...
LOCALITY.	Bristol County	5	21	18	3	8	16	20	9	5	15	1	....	2	7	....	5	3	....	17	13	9	..
	Kent County	11	27	20	6	5	16	34	12	8	11	8	1	14	21	....	6	5	5	19	27	16	5
	Newport County Towns	7	11	4	8	4	4	10	1	1	1	....	3	5	11	1	4	...	...	12	8	...	2
	Newport City	16	12	23	11	6	31	31	3	2	3	1	....	4	25	3	12	3	8	17	31	4	1
	Providence County Towns	61	80	117	46	34	125	174	26	44	88	20	42	42	88	6	35	20	19	64	117	77	22
	Pawtucket City	20	21	36	17	15	35	72	17	20	26	8	8	7	35	....	8	11	7	45	25	3	5
	Providence City	71	128	210	84	80	119	323	39	49	108	23	29	38	193	10	92	39	90	76	227	154	28
	Washington County	15	28	12	1	7	9	46	6	4	35	5	2	15	26	1	7	5	3	28	40	3	5

COMMENTS.

In the preceding pages there have been presented, numerically and in tabular form, the various causes of death in Rhode Island, in 1887. In Tables VII and VIII they were presented at considerable length, in various specific terms, and in Table IX more or less grouped in a general nosological arrangement.

In Table VII the number of deaths from *each cause* and of *each sex* is shown, for *each month* in the year, and the *parentage* of the decedents from *each cause* during the year.

In Table VIII the number of decedents of *each sex* from *each cause*, in the *different periods of life* is given.

In Table IX, with the classification and percentage of causes of death, the number of each general cause, in each division of larger population, is given.

Table LVIII is a compend in part of the three tables previously alluded to, and contains the particulars of the causes of death, in 1887, of the principal causes which will be commented upon in the following pages.

DEATHS FROM ACCIDENTS.

The number of deaths from accidental causes of all kinds, reported in Rhode Island, in 1887, was 206. This number is 17 more than during 1886.

Among the 206 deaths from accident there were 14 from asphyxia; 17 from burns and scalds; 39 from drowning; 17 from falls; 23 from fractures of various kinds; 6 from heat; 7 from poison; 24 from accidents of various forms on railroads; and 59 from numerous other accidental circumstances.

Of the whole number of deaths by accident 158 were males, and 48 were females; 92 were of American, and 114 were of foreign parentage.

Of the sexes the proportion was 76.7 per cent. of male decedents, to 23.3 per cent. of female decedents. Of parentage, 55 per cent. was of foreign, and 45 per cent. of American.

The number of deaths in each division of the year was as follows:

First Quarter	34	Third Quarter	79
Second Quarter	45	Fourth Quarter	48
First Half	79	Second Half	127
Whole Year	206		

In regard to periods of life, the decedents from accidental causes were divided as follows: Under 5 years, 36; 5 and under 10, 11; between 10 and 20, 24; between 20 and 40, 54; between 40 and 60, 34; over 60, 39; and 4, age not stated.

In regard to sectional divisions of the State, 5 of the deaths from accidental causes were in Bristol county; 11 in Kent county; 23 in Newport county; 15 in Washington county, and 152 in Providence county.

The whole number of deaths from accidental causes, in 1887, *in proportion to the whole number of deaths* from specified causes, in the State, was about 32.5 in every one thousand.

APOPLEXY AND PARALYSIS.

There were 328 deaths from apoplexy and paralysis in Rhode Island, in 1887, according to the returns. The number reported is 39 more than in the year 1885, and 5 less than in 1886.

The following Table will present the social and local relations of apoplexy and paralysis, as causes of death, during the last twenty-three years:

TABLE LIX.

Showing the whole number and percentage of the Deaths in the State, from Apoplexy and Paralysis combined: and also the Sex and Parentage of the Decedents from these causes, and the Number of the same in each of the Counties, from 1865 to 1887, inclusive.

YEARS.	Whole Number of Deaths.	APOPLEXY AND PARALYSIS.											
				SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
		Number from Apoplexy and Paralysis.	Per cent.	Males.	Females.	American.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County Towns.*	Providence City.	Washington County.
1865......	3,405	100	2.93	52	48	81	19	9	8	14	23	38	8
1866......	2,970	92	3.09	46	46	80	12	7	5	17	24	29	9
1867	2,889	124	4.29	59	65	101	23	9	9	13	35	49	9
1868......	2,912	111	3.81	56	55	86	25	9	6	19	27	46	4
1869......	3,382	117	3.46	55	62	92	25	12	13	18	20	48	6
1870......	3,238	130	4.32	68	62	105	25	14	10	10	39	52	5
1871......	3,344	156	4.66	73	83	113	43	10	17	15	40	61	13
1872......	4,247	125	2.97	62	63	96	29	17	9	10	27	52	10
1873......	4,403	134	3.04	59	75	109	25	9	8	17	26	57	17
1874......	4,229	156	3.69	84	72	120	36	14	10	16	42	59	15
1875......	4,317	166	3.61	79	87	133	33	7	13	17	46	75	8
1876......	4,116	165	4.01	79	86	130	35	13	11	13	45	68	1
1877......	4,450	181	4.07	87	94	123	58	10	10	16	52	74	19
1878......	4,441	188	4.23	104	84	145	43	12	16	21	58	66	15
1879......	4,472	220	4.92	114	106	146	74	12	9	29	71	89	10
1880......	4,829	215	4.67	109	106	157	58	18	13	22	71	78	13
1881......	5,016	244	4.86	116	128	170	74	17	15	25	70	101	16
1882......	5.074	265	5.22	139	126	168	97	15	29	25	65	117	15
1883......	5,282	275	5.22	138	137	192	83	11	28	22	75	118	21
1884......	5,141	298	5.80	135	163	176	122	21	14	28	108	105	22
1885	5,389	289	5.38	144	145	183	106	16	18	28	99	110	18
1886......	5,849	333	5.70	173	160	230	103	11	27	32	108	120	35
1887......	6,340	328	5.17	161	167	213	115	21	27	23	101	128	28
Total.....	99,735	4,412	4.14	2,174	2,238	3,149	1,263	295	325	449	1,272	1,740	331

Table LIX shows a large proportional as well as actual increase of deaths from apoplexy and paralysis, during twenty-three years.

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* Including Pawtucket.

There was a slight falling off in 1887 from the previous year, but the rule still holds in taking periods of five years together.

TABLE LX.

Showing the Ages of Decedents from Apoplexy and Paralysis, in each of the last twenty-three years.

APOPLEXY AND PARALYSIS.	PERIODS OF LIFE.								
	Under 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Not stated.
1865	......	3	5	6	19	20	28	19	......
1866	1	1	7	16	9	24	27	7	......
1867	2	......	6	6	15	38	40	17	......
1868	2	3	3	11	16	27	31	16	2
1869	1	1	5	12	20	28	34	15	1
1870	4	1	10	9	12	33	41	20	......
1871	3	4	7	14	21	46	45	15	1
1872	1	4	5	17	20	26	41	11	......
1873	2	3	4	14	22	35	37	16	1
1874	1	2	9	9	30	39	40	25	1
1875	6	2	8	19	23	40	45	22	1
1876	4	4	4	13	25	43	49	23	......
1877	1	2	9	12	24	50	61	22	......
1878	4	2	7	14	41	40	53	26	1
1879	4	6	11	18	27	57	59	38	1
1880	1	2	8	18	21	59	70	34	2
1881	1	7	11	20	36	55	70	42	2
1882	4	5	14	28	41	57	77	38	1
1883	8	4	11	19	45	56	83	49	......
1884	10	7	16	21	32	68	95	45	4
1885	8	5	7	25	29	76	94	44	1
1886	7	8	10	25	52	65	112	51	3
1887	12	6	13	26	50	90	96	9	1
Total	87	72	190	372	630	1,072	1,317	604	23

DISEASES OF THE BRAIN.

Under the head of "Diseases of the Brain," in Table LVIII, there are included all those diseases returned as "Cerebral Meningitis," "Cerebritis," "Congestion," Encephalitis," "Inflammation," and "Diseases of the Brain," including some peripheral manifestations otherwise named.

The whole number is 317. Of diseases of the brain proper there were 209, which is 27 more than in 1886.

The proportions of deaths from these causes to whole number of deaths from all causes, during each of the last twelve years, are as follows:

Years.	Per cent.	Years.	Per cent.
1876	3.75	1882	3.60
1877	3.68	1883	3.40
1878	3.28	1884	2.90
1879	3.72	1885	3.53
1880	3.49	1886	3.11
1881	2.57	1887	3.29

Of the 209 decedents 126 were males, and 83 were females. In regard to parentage, 106 were of American, and 103 of foreign parentage.

The deaths in the different seasons of the year were as follows:

First Quarter	52	Third Quarter	62
Second Quarter	52	Fourth Quarter	43
First half	104	Last half	105
Whole number	209		

In accordance with the rule, the largest number of deaths from diseases of the brain occurred in the third quarter of the year.

Brain diseases occur largely in children. Of the 209 decedents from those causes, in 1887, 110 were under five years of age, and 133 were under ten years of age.

BRONCHITIS.

The number of decedents, in 1887, whose deaths were reported as having been caused by bronchitis, was 176. This is a slightly larger number than was ever before returned in a single year.

Of the 176 decedents 90 were males and 86 were females; or at the rate of 104 males to each 100 females.

In relation to parentage, 60 were of American, and 116 of foreign parentage.

TABLE LXI.

Showing the whole number of Decedents in the State from Bronchitis, with the Percentage of whole number of Deaths, the Sex, Parentage, and Localities of Occurrence, during each of the twenty-three years from 1865 to 1887, inclusive.

YEARS.	Whole Number of Deaths.	BRONCHITIS.											
		Number of Deaths from Bronchitis.	Per cent.	SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
				Males.	Females.	American.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County Towns.*	Providence City.	Washington County.
1865......	1,905	9	.27	4	5	6	3	1	......	3	......	5	......
1866......	2,970	14	.51	3	11	10	4	.....	1	2	7	4	......
1867......	2,889	19	.71	8	11	10	9	1	2	1	5	10	.....
1868......	2,912	20	.76	9	11	7	13	......	1	2	5	10	2
1869......	3,382	20	.65	8	12	9	11	......	......	1	4	15	......
1870......	3,238	26	.84	15	11	11	15	......	......	8	8	17	......
1871......	3,344	24	.78	10	14	11	13	......	1	1	5	17	......
1872......	4,247	25	.65	10	15	11	14	1	1	1	6	16	......
1873......	4,403	27	.64	12	15	11	16	......	......	1	7	18	1
1874......	4,229	39	.96	22	17	12	27	......	......	......	6	32	1
1875......	4,317	57	1.39	32	25	29	28	......	......	1	21	33	2
1876......	4,116	57	1.46	23	34	26	31	......	2	......	7	46	2
1877......	4,450	69	1.62	32	37	35	34	1	1	1	22	44	......
1878.....	4,441	80	1.89	30	50	37	43	1	2	6	22	48	1
1879......	4,472	62	1.47	31	31	31	31	1	1	5	21	34	......
1880......	4,829	91	1.98	49	42	44	47	1	6	6	21	56	1
1881......	5,016	84	1.80	48	36	39	45	1	1	2	25	53	2
1882......	5,074	100	2.08	39	61	47	53	3	2	6	25	60	4
1883......	5,282	111	2.10	56	55	51	60	5	2	3	41	57	2
1884......	5,141	118	2.29	58	60	40	70	7	......	8	42	62	......
1885......	5,389	168	3.08	82	86	91	77	5	3	13	71	76	......
1886......	5,849	174	2.96	75	99	81	93	3	4	9	74	83	1
1887......	6,340	176	2.77	90	86	60	116	3	6	19	63	84	1
Total, 23 years...	99,735	1,570	1.49	746	824	709	853	34	36	92	509	880	20

During the first four months of the year the decedents from bronchitis numbered 78, during the last four months the number was 55.

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* Including city of Pawtucket.

There were 88 of the decedents under five years of age, 22 between five and forty years, 23 between forty and sixty, and 43 of the age of sixty and over.

The increased knowledge of methods of differential diagnosis must account, at least in part, for the greatly increased proportion of deaths returned as having been caused by bronchitis during the last few years, many cases of bronchitis having doubtless been, in former years, returned as pneumonia.

CANCER.

There were 159 decedents in 1887 whose deaths were caused by cancer, according to the returns. The term cancer includes all the various kinds, and in whatever place located.

The varieties of cancer, as reported, may be found in Tables VII and VIII, on pages 17 and 28. They are classed in Table IX as follows: Cancer in various localities, or cancer (various), 70; cancer of the breast, 21; of the liver, 19; of the stomach, 26; of the rectum, 5; of the uterus, 18.

In 1887 the deaths from cancer, in the several seasons of the year, were as follows:

First Quarter	36	Third Quarter	55
Second Quarter	31	Fourth Quarter	37
	—		—
First half	67	Last half	92
Whole number	159		

The percentage of deaths from cancer, in proportion to whole number of deaths, in each year for twelve years, 1876 to 1887, inclusive, is shown as follows:

Years.	Percentage.	Years.	Percentage.
1876	2.72	1882	2.75
1877	3.17	1883	3.20
1878	2.82	1884	3.05
1879	2.96	1885	3.59
1880	2.72	1886	2.77
1881	2.90	1887	2.50

Sex.—Of the 159 decedents from cancer, 49 were males, and 110 were females; or 30 males and 70 females in every 100.

Parentage.—There were 96 of American parentage, and 63 of foreign.

CHILD–BIRTH.

Under the head of "Child-birth" are included puerperal fever, puerperal convulsions, and whatever causes that only occur as the result of child-birth.

The number reported in 1887 was 50; 22 of which were from the immediate effects of child-birth, including metritis, hemorrhage, &c., 7 from puerperal convulsions, and 21 from puerperal fever.

Of the whole number 13 were of American, and 37 of foreign parentage.

CHOLERA INFANTUM.

The number of deaths from cholera infantum, according to the returns for 1887, was 355. The number is 22 less than in 1886.

Sex.—Of the 355 decedents 200 were males, and 155 were females; or 130 males to every 100 females.

In proportion to the population, by estimation, the deaths occurred in the different divisions of the State as follows:

Bristol County	One in every 725 persons.
Kent County	One in every 1,384 persons.
Newport County	One in every 835 persons.
Providence County Towns	One in every 666 persons.
Pawtucket	One in every 700 persons.
Providence City	One in every 1,025 persons.
Washington County	One in every 2,515 persons.
Entire State	One in every 893 persons.

The following Table shows the whole number of reported deaths from cholera infantum; the sex and parentage of the decedents; and the number in each of the larger divisions of the State, in each of the last twenty-three years:

TABLE LXII.

YEARS.	CHOLERA INFANTUM.										
		SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
	Number of Deaths.	Males.	Females.	American.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County Towns.*	Providence City.	Washington County.
1865	145	63	82	61	84	17	7	14	48	50	9
1866	110	67	43	50	60	1	7	8	39	47	8
1867	117	64	53	62	55	4	3	7	45	49	9
1868	154	85	69	66	88	13	4	12	44	70	11
1869	151	81	70	79	72	6	15	6	48	65	11
1870	213	106	107	95	118	15	15	13	69	93	8
1871	172	85	87	82	90	14	12	12	59	62	13
1872	391	195	196	167	224	16	16	21	157	151	30
1873	285	148	137	165	120	17	14	16	120	99	19
1874	265	140	125	115	150	4	12	5	84	134	26
1875	318	156	162	155	163	20	16	20	108	136	18
1876	250	131	119	105	145	5	12	29	68	124	12
1877	259	139	120	96	163	12	12	9	96	122	7
1878	168	96	72	73	95	7	14	7	64	71	5
1879	161	88	73	71	90	8	16	21	51	50	6
1880	247	123	124	109	138	13	11	10	93	100	20
1881	240	130	110	102	138	10	22	14	75	102	17
1882	325	173	152	133	192	20	11	19	132	130	13
1883	242	124	118	104	138	12	7	22	88	108	5
1884	325	177	148	139	186	10	12	26	114	144	19
1885	279	150	129	128	151	5	23	16	133	86	16
1886	377	179	198	143	234	4	29	15	194	120	35
1887	355	200	155	145	210	16	16	35	160	119	9
Total, 23 years	5,549	2,900	2,649	2,445	3,104	249	307	351	2,089	2,241	326

The number of decedents from cholera infantum, during the twenty-three years from 1865 to 1887, inclusive, was 5,549.

The proportion to total mortality, for the period of twenty-two years, was 5.8 per cent. For 1887 the proportion was 6.27 per cent.

There were 109 males to every 100 females among the decedents during the twenty-three years; and 126 decedents of foreign parentage to every 100 of American, during the same period.

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* Including Pawtucket.

CONSUMPTION.

The decedents from consumption, during 1887, numbered 710. The number is 116 less than in the preceding year, and less than in any year since 1881.

Sex.—Of these 710 decedents 312 were males, and 398 were females; giving 127.5 female decedents to every 100 male decedents; or 44 males and 56 females in every 100 decedents from consumption.

As a rule there are one hundred and twenty or more females to every one hundred male decedents from consumption.

Parentage.—There were 266 decedents of American parentage, and 444 of foreign; a proportion of 167 of foreign parentage to every 100 of American. In 1884 there were 160 of foreign parentage to every 100 of American, and in 1885 148 of foreign to every 100 of American.

Season.—The largest number of deaths in any one month, 74, occurred in April; the next largest, 65, in January; the smallest number, 47, in July.

The number in each quarter of the year was as follows:

First Quarter	181	Third Quarter	168
Second Quarter	193	Fourth Quarter	168
First half	374	Last half	336
Whole number	710		

Ages.—During 1887, of the 710 decedents from consumption, 189, or more than one-fourth, were between the ages of 20 and 30; and 149, or more than one-fifth, were between the ages of 30 and 40.

In order to show more concisely the relation of age to mortality from consumption, during 1887, the following synopsis is presented:

Under 10 years of age	35
Between 10 and 20 years	98
Between 20 and 30 years	189
Between 30 and 40 years	149
Between 40 and 50 years	89
Between 50 and 70 years	109
Over 70 years	36
Not stated	5
Total	710

The following Table shows the total deaths from all reported *known causes*, with the number and percentage of deaths from consumption to the same, in each of the larger divisions of the State, and in the whole State, in each of the last seventeen years; and also the aggregate for a period of twenty-five years, from 1860 to 1884, inclusive:

TABLE LXIII.—CONSUMPTION—*Number, Locality and Percentage.*

COUNTIES.	1871.	1872.	1873.	1874.	1875	1876	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886	1887.	Total, 25 years, 1860–1884.
BRISTOL COUNTY.																		
Total deaths, stated causes	150	184	173	159	162	148	201	187	141	209	203	183	197	199	185	221	217	4,135
Consumption...	16	23	16	18	21	19	27	23	16	19	25	36	19	21	12	23	20	543
Percentage	10.67	12.50	8.24	11.32	12.97	12.83	13.43	12.30	11.35	9.09	12.31	19.68	9.64	10.50	6.48	10.35	9.22	13.13
KENT COUNTY.																		
Total deaths, stated causes	281	248	241	252	263	209	251	249	277	293	313	288	283	268	355	385	343	6,206
Consumption............	63	33	42	32	43	28	42	41	38	45	36	51	39	37	45	43	34	1,078
Percentage	22.42	13.30	17.43	12.69	16.35	13.39	16.73	16.47	13.72	15.35	11.20	17.71	13.78	13.43	12.70	11.20	9.91	17.37
NEWPORT COUNTY.																		
Total deaths, stated causes	214	262	366	221	277	280	243	265	330	324	346	378	401	403	408	433	435	7,869
Consumption............	23	29	44	26	41	45	33	31	45	34	51	46	55	43	47	57	41	1,086
Percentage	10.75	11.06	12.02	11.77	14.80	16.07	13.58	11.69	13.64	10.40	14.74	12.17	13.72	10.67	11.52	13.16	9.19	13.80
PROVIDENCE CO. TOWNS.*																		
Total deaths, stated causes	989	1,331	1,389	1,217	1,230	1,110	1,301	1,308	1,233	1,437	1,451	1,509	1,656	1,723	1,918	2,087	2,345	28,161
Consumption............	195	321	197	136	201	211	222	229	197	189	220	224	257	248	273	276	246	4,799
Percentage	19.72	16.73	14.18	11.41	16.34	19.01	15.96	17.51	15.98	15.35	15.16	14.82	15.52	14.13	14.20	13.05	10.49	17.04

* Including Pawtucket.

TABLE LXIII.—CONSUMPTION—*Number, Locality and Percentage.*—Continued.

COUNTIES.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	Total, 25 years, 1860-1884.
PROVIDENCE CITY.																		
Total deaths, stated causes	1,239	1,581	1,725	1,965	1,894	1,850	1,932	1,973	2,017	2,063	2,130	2,230	2,351	2,227	2,157	2,341	2,630	39,195
Consumption …………	185	242	230	270	297	284	294	305	293	322	344	351	364	344	348	368	323	6,374
Percentage ……………	16.74	15.31	13.33	13.74	15.68	15.35	15.22	15.46	14.53	15.60	16.15	15.73	15.48	15.43	16.10	15 65	12.23	16.26
WASHINGTON COUNTY.																		
Total deaths, stated causes	222	265	292	263	284	306	240	249	220	270	226	215	208	279	307	331	351	5,711
Consumption …………	35	49	51	44	47	68	43	47	48	33	30	29	32	46	56	59	46	1,031
Percentage …………	15.76	18.49	17.47	16.73	16.55	22.22	17.91	18.88	21.82	12.22	13 27	13.49	15.40	16.28	17 93	17.52	13.10	18.05
WHOLE STATE.																		
Total deaths, stated causes	3,095	3,871	4,186	4,077	4,110	3,903	4,258	4,231	4,218	4,596	4,669	4,804	5,096	5,099	5,330	5,798	6,321	91,477
Consumption …………	527	597	580	529	650	655	661	676	637	642	706	737	766	739	781	826	710	14,911
Percentage ……………	17.03	15.41	13.86	12.96	15.79	16.78	15.52	15.98	15.10	14.01	15.12	15.33	15.03	14.34	14.42	14.12	11.19	16.30

It is a very unusual circumstance, if indeed it ever occurred before, that there was a less number of deaths in any year from consumption, in every county and in every locality of large population in Rhode Island, than in the preceding year.

That circumstance having occurred in 1887, it follows, in consequence, that the percentage of deaths from consumption, during the same year, to the total mortality, was smaller in every locality.

In the entire State as a whole, in Providence city, and in every county except Bristol and Washington, the percentage is the smallest ever recorded. In the counties of Bristol and Washington, and including both, the exceptions are four or five only during the whole period of registration.

Consumption, as a cause of death, has lessened in importance, in Rhode Island, during the last thirty years.

The following summary will show the average annual percentage of deaths from consumption to all other stated causes of death, in periods of five years each, from 1860 to 1884, inclusive; and in each of the last three years:

CONSUMPTION.

	Five years, 1860–1864.	Five years, 1865–1869.	Five years, 1870–1874.	Five years, 1875–1879.	Five years. 1880–1884.
Percentage	18.70	18.74	15.56	15.83	14.80
Per 1,000 deaths	187.0	187.4	155.6	158.3	148.0

Years	1885	1886	1887
Per cent	14.42	14.12	11.19
Per 1,000 deaths	144.2	141.2	111.9

The proportion of deaths from consumption to the *population* in the different counties and the city of Providence, during the last three years, may be seen in the following summaries:

CONSUMPTION. *Proportion of Deaths to Population.*

1885.

	Persons, one death to every		In every 1,000 of population.
Bristol County	945	or	1.06
Kent County	480	or	2.09
Newport County	602	or	1.66
Providence County Towns	375	or	2.66
Providence City	339	or	2.95
Washington County	401	or	2.49
Entire State	389	or	2.57

CONSUMPTION. *Proportion of Deaths to Population.*

1886.

	Persons, one death to every		In every 1,000 of population.
Bristol County	505	or	1.98
Kent County	515	or	1.94
Newport County	513	or	1.95
Providence County Towns	391	or	2.55
Providence City	326	or	3.06
Washington County	383	or	2.61
Entire State	376	or	2.66

CONSUMPTION. *Proportion of Deaths to Population.*

1887.

	Persons, one death to every		In every 1,000 of population.
Bristol County	584	or	1.71
Kent County	651	or	1.53
Newport County	712	or	1.40
Providence County Towns	440	or	2.27
Providence City	370	or	2.70
Washington County	492	or	2.03
Entire State	447	or	2.24

The subject of consumption as a cause of death, and in various relations, was presented at considerable length in the Thirty-Third Registration report, and included the statistics of twenty-five years previous to 1885. These statistics, compiled with a large amount of labor, present many facts of interest, to which the reader desirous of further investigation of this the most universal and fatal of all diseases is respectfully referred.

CROUP.

There were 113 decedents from croup, in Rhode Island, in 1887. There were 90 in 1886, 94 in 1885, 80 in 1884, 71 in 1883, 77 in 1882, and 101 in 1881.

Sex.—Of the 113 decedents from croup, in 1887, there were 58 males and 55 females, a proportion of 105.4 males to each 100 females, which is in accordance with the rule of thirty years, in which there has been a preponderance of males.

Parentage.—There were 43 decedents of American parentage, and 70 of foreign parentage. The proportions were in the ratio of 162 of foreign to each 100 of American parentage.

Season.—See diphtheria, on pages following.

Age.—There were 26 of the decedents under one year of age, 24 of one year and under two, 44 of two years and under five, and 17 between five and ten, and 2 above twenty years of age.

Of the 113 deaths from croup 62 occurred in Providence county.

CROUP. *Sex and Parentage—30 years.*

The proportions of the sexes of the decedents from croup, in the aggregate of thirty years, were as follows: To every 100 female decedents there were 102.8 male decedents; or about 52.5 males and 47.5 females in every 100 decedents.

During the twenty-three years from 1865 to 1887, inclusive, the decedents from croup, of American parentage, numbered 737, and of foreign parentage 1,029. To every 100 decedents of American parentage there were 139 of foreign parentage; or about 41 of American and 59 foreign in every 100 decedents.

DIARRHŒA AND DYSENTERY.

There were 199 decedents from diarrhœa and dysentery, in 1887.

Sex.—Of the 199, 107 were males, and 92 were females, or in the ratio of about 116 males to each 100 females.

Parentage.—There were, of the 199 decedents, 70 of American parentage, and 129 of foreign parentage, or a proportion of about 184 of foreign parentage to every 100 of American.

Age.—There were 105 of the decedents from diarrhœa and dysentery under 5 years of age, and there were 33 over 70 years of age, leaving 61 for all the years between 5 and 70.

Locality.—Of the 199 decedents 164 were in Providence county. Only 3 deaths from diarrhœa, and but one from dysentery, reported from Newport county.

Season.—There were 126 of the deaths from diarrhœa and dysentery that occurred during the months of July, August and September.

DIPHTHERIA.

The number of deaths from diphtheria, in 1887, was 287, which was 59 more than in 1886.

Sex.—Of the 287 decedents, 135 were males, and 152 were females, or a proportion of 88 males to each 100 females.

Parentage.—There were 101 of American, and 186 of foreign parentage, a proportion of about 36 of American and 64 of foreign in each 100 decedents.

Season.—There were 48 deaths from diphtheria in the first quarter, 47 in the second quarter, 77 in the third quarter, and 115 in the fourth quarter.

Age.—There were 181 under five years of age, and 82 between five and ten. One case of 44 years of age reported.

Locality.—Of the 287 decedents, 222 were in Providence county; 11 in Kent county; 15 in Bristol county; 4 in Newport county; and 35 in Washington county.

CROUP AND DIPHTHERIA.

For the purpose of comparison of the two diseases, from year to year, the following Table will show the number of deaths and the sex of the decedents in Rhode Island, from croup and from diphtheria, in the aggregate of seven years from 1858 to 1864, inclusive, and also the number, the sex and the *parentage* of the decedents from croup and from diphtheria, in each of the last twenty-three years, from 1865 to 1887, inclusive:

TABLE LXIV.

YEARS.	CROUP.					DIPHTHERIA.				
	Number of Deaths.	SEX.		PARENTAGE.		Number of Deaths.	SEX.		PARENTAGE.	
		Males.	Females.	American.*	Foreign.*		Males.	Females.	American.	Foreign.
7 years, 1858–1864	517	264	253	......	......	629	272	357	......	......
1865	94	44	50	32	62	82	41	41	62	20
1866	53	26	27	22	31	64	26	38	36	28
1867	50	25	25	21	29	31	14	17	19	12
1868	30	13	17	14	16	20	8	12	11	9
1869	41	19	22	14	27	33	18	15	19	14
1870	53	29	24	25	28	33	17	16	18	15
1871	72	39	33	31	41	57	23	34	29	28
1872	66	37	29	17	49	48	24	24	35	13
1873	68	30	38	35	33	45	24	21	35	10
1874	65	39	26	38	27	59	30	29	37	22
1875	96	53	43	43	53	33	17	16	18	15
1876	102	50	52	42	60	159	77	82	69	90
1877	95	48	47	34	61	492	239	253	233	259
1878	93	45	48	43	50	435	224	211	201	234
1879	96	58	38	40	56	259	121	138	143	116
1880	66	32	34	27	39	152	73	79	75	77
1881	101	45	56	38	63	216	106	110	118	98
1882	77	41	36	32	45	101	48	53	55	46
1883	71	32	39	33	38	95	39	56	45	50
1884	80	40	40	32	48	119	65	54	47	72
1885	94	45	49	42	52	99	47	52	48	51
1886	90	45	45	39	51	228	98	130	101	127
1887	113	58	55	43	70	287	135	152	101	186
Total, 30 years	2,283	1,157	1,126	737	1,029	3,776	1,786	1,990	1,555	1,594

During the thirty years the whole number of deaths from croup was 2,283, and the number from diphtheria was 3,776.

For every 100 deaths from croup there were 165 deaths from diphtheria.

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* Parentage not reported previous to 1865.

CROUP. *Sex, 30 years, and Parentage, 23 years.*

The proportions of the sexes of the decedents from croup, in the aggregate of thirty years, were as follows: To every 100 female decedents there were 102.8 male decedents; or about 52 males and 48 females in every 100 decedents.

During the twenty-three years from 1865 to 1887, inclusive, the decedents from croup, of American parentage, numbered 737, and of foreign parentage 1,029. To every 100 decedents of American parentage there were 139 of foreign parentage; or about 41 of American and 59 foreign in every 100 decedents.

DIPHTHERIA. *Sex, 30 years, and Parentage, 23 years.*

Of the 3,776 decedents from diphtheria, in the aggregate of thirty years, there were 1,786 males and 1,990 females; a proportion of 111.4 females to every 100 males; or 53 females and 47 males in every 100 decedents.

Of the parentage of the decedents from diphtheria, during the last twenty-three years, 1,555 were of American, and 1,594 of foreign parentage. There were, for every 100 of American, 102.5 of foreign; or about 49 of American and 51 of foreign parentage in every 100 decedents.

SEASON AND MORTALITY.

The following Table will show the influence of season, in regard to mortality from croup and scarlatina for *thirty-five* years, and diphtheria for *thirty* years; and in which these diseases may be compared. The Table will give the average *monthly* and *quarterly* percentages of deaths from each cause:

TABLE LXV.

MONTHS.	CROUP. 1853–1887.		DIPHTHERIA. 1858–1887.		SCARLATINA. 1853–1887.	
	Number of deaths.	Per cent.	Number of deaths.	Per cent.	Number of deaths.	Per cent.
January	328	12.66	365	9.68	646	11.85
February	268	10.34	260	6.88	579	10.63
March	220	8.48	270	7.15	530	9.73
First Quarter	816	31.48	895	23.71	1,755	32.21
April	184	7.09	226	5.90	441	8.10
May	128	4.93	242	6.40	481	8.83
June	116	4.47	227	6.00	418	7.69
Second Quarter	428	16.49	695	18.30	1,340	24.62
July	86	3.32	208	5.48	314	5.76
August	72	2.77	245	6.38	261	4.79
September	162	6.25	272	7.45	269	4.94
Third Quarter	320	12.34	825	19.31	844	15.49
October	272	10.49	502	13.29	384	7.04
November	376	14.51	505	13.37	493	9.04
December	381	14.69	454	12.02	632	11.60
Fourth Quarter	1,029	39.69	1,461	38.68	1,509	27 68
Totals	2,593	100.00	3,776	100.00	5,448	100.00

FEVER. MALARIAL.

The increased and increasing number of deaths from malarial diseases, attended with more or less febrile disturbance constituting fever in a greater or less degree, seem to demand a separate presentation, they having heretofore been classed with other fevers, as fever typhoid, et al.

The number of deaths, during 1887, from diseases classed as fever malarial, was 85. The number in 1886 was 43, nearly one-half less than in 1887. In 1885 there were 30; in 1884, 25; in 1883, 12; in 1882, 8.

Sex.—Of the 85 decedents from malarial fevers, in 1887, 50 were males and 35 were females, or 143 males to every 100 females.

Parentage.—There were, of the 85 decedents from malarial diseases, 29 of American parentage, and 56 of foreign, or 193 of foreign parentage to every 100 of American.

Season.—The deaths from malarial diseases occurred in the different seasons of the year as follows:

First Quarter	4	Third Quarter	38
Second Quarter	18	Fourth Quarter	25
	—		—
First half of year	22	Second half of year	63
Whole year	85		

Age.—The number of decedents in the different periods were as follows:

Under 5 years of age	20
From 5 to 20 years of age	16
From 20 to 40 years of age	14
From 40 to 60 years of age	12
60 and over	23
	—
	85

It will be seen that the disease was most fatal in the early and late periods of life.

Localities.—Bristol county, none; Kent county, 1; Newport county, 3; Providence county, 79; Washington county, 2.

FEVERS, TYPHOID, ETC.

The number of decedents, whose deaths were returned as having been caused by "fever" of some form, not malarial nor spinal, was 127. Deaths from puerperal fever are not included.

The term "fever" includes the following types of febrile diseases, as may be seen in Table VIII, on page 20: "fevers unspecified," 10; "typhoid," 117.

The following Table exhibits, for each of the last twenty-three years, the number and the percentage, and the sex and parentage of the decedents from fevers, and the number in each division of the State:

TABLE LXVI.

YEARS.	TYPHOID FEVER, ETC.											
			SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
	Whole Number.	Per cent.	Males.	Females.	American.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County Towns.*	Providence City.	Washington County.
1865	229	6.4	114	115	149	80	8	17	22	82	79	21
1866	150	6.0	73	77	82	68	7	5	32	54	45	7
1867	119	4.1	60	59	84	35	9	10	17	47	31	5
1868	84	2.9	45	39	57	27	4	5	7	30	23	15
1869	101	3.0	53	48	79	22	7	7	1	37	33	16
1870	153	4.7	66	87	80	73	5	11	14	57	49	17
1871	125	3.7	60	65	69	56	2	8	10	41	51	13
1872	179	4.2	87	92	91	86	4	12	6	75	65	17
1873	172	3.9	73	99	113	59	4	9	9	61	56	33
1874	117	2.8	57	60	56	61	1	10	3	37	58	8
1875	147	3.4	73	74	90	57	1	4	6	49	69	18
1876	126	3.0	65	61	71	55	5	9	13	44	33	22
1877	134	3.0	63	71	65	69	8	10	8	52	44	12
1878	150	3.4	68	82	77	73	13	13	6	59	47	12
1879	114	2.7	47	67	63	51	4	13	6	44	40	7
1880	158	3.4	74	84	94	64	8	12	5	66	52	15
1881	143	2.8	74	69	74	69	4	13	14	58	41	13
1882	229	4.7	111	118	100	129	6	11	5	56	145	6
1883	258	4.8	146	112	117	141	9	16	10	82	134	7
1884	165	3.2	83	82	78	87	7	7	12	66	64	9
1885	158	2.9	71	87	70	88	6	14	8	69	53	9
1886	169	2.9	78	91	76	93	6	8	11	66	70	8
1887	127	2.0	67	60	58	69	2	14	9	49	38	15
Total	3,507	3.5	1,708	1,799	1,893	1,614	130	138	234	1,281	1,320	305

The percentage of deaths from typhoid and unspecified fevers, in 1887, in proportion to total mortality, was smaller than in any previous year.

Sex.—Of the 127 decedents 67 were males, and 60 were females; or a proportion of about 111 males to every 100 females.

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* Including Pawtucket.

During the period of twenty-three years, 1865 to 1887, inclusive, the proportions of the sexes of the decedents from "fever," in Rhode Island, were 105 females to every 100 males.

Parentage.—There were 58 decedents from fever, of American parentage, in 1887, and 69 of foreign parentage, a proportion of about 54 of foreign and 46 of American in every 100 decedents.

The following Table shows the number of decedents from fevers, in each division of ages, in each of the last twenty-three years, in the State of Rhode Island:

TABLE LXVII.

TYPHOID FEVER.	PERIODS OF LIFE.										
YEARS.	Under 10.	10 to 15	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 & over.	Not stated.
1865	35	18	46	54	30	14	18	7	5	2	....
1866	23	10	21	26	21	16	9	14	10	....	....
1867	17	6	24	33	12	11	8	4	2	2	1
1868	10	7	10	21	8	8	10	4	5	....	....
1869	10	8	14	28	9	7	9	8	6	2	....
1870	15	13	28	39	16	20	7	7	6	1	....
1871	13	10	20	28	18	16	9	4	5	2	....
1872	17	18	34	54	20	9	12	11	3	1	....
1873	27	12	34	31	25	13	13	7	8	2	....
1874	10	14	26	32	9	5	10	3	6	2	....
1875	23	14	19	43	18	10	10	6	4	....	....
1876	21	10	15	24	14	9	6	16	6	3	2
1877	22	13	13	36	20	8	5	7	2	2	1
1878	17	16	27	47	13	11	12	2	3	2	....
1879	19	7	14	26	15	6	3	12	8	3	1
1880	25	12	24	43	23	12	10	5	3	....	1
1881	25	9	19	27	14	11	9	12	11	4	....
1882	24	22	44	69	27	14	9	10	9	1	....
1883	36	25	46	75	31	12	11	10	8	2	2
1884	24	13	19	47	22	9	12	10	5	3	1
1885	35	12	16	25	26	11	11	12	6	4	....
1886	29	9	25	41	20	14	17	8	5	1	....
1887	24	8	16	31	16	10	5	8	4	4	1
Totals	501	286	553	890	427	256	225	187	130	43	10

Of the 3,507 decedents from fever, during the last twenty-three years, 1,340 were under 20 years of age, and 1,317 were between 20 and 40 years of age. There was, therefore, about 38 per cent. of the decedents under 20 years of age, and nearly the same per cent. between 20 and 40; or nearly 75 per cent. of the whole number of decedents from typhoid fevers were under 40 years of age.

Table LXVIII.

Comparative exhibit of the percentages of Deaths from Typhoid Fever, to total deaths from specified causes, in four New England States, for twelve years, 1876–1887.

	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.
Rhode Island.....	3.0	3.0	3.4	2.7	3.4	2.8	4.7	4.8	3.2	2.9	2.9	2.0
Massachusetts....	2.7	2.7	2.3	1.9	2.5	2.9	2.9	2.3	2.4	2.0	2.1	2.2
Connecticut.......	3.6	3.3	2.7	1.8	2.5	2.5	3.1	2.1	2.5	1.1	2.2	......
Vermont..........	4.2	4.8	3.4	2.7	3.5	5.5	3.4	3.1	......	......	2.5	......

DISEASES OF THE HEART.

The number of decedents from diseases of the heart, as reported in 1887, was 406. The number is larger by 76 than that of 1886.

Sex.—There were 205 male decedents, and 201 female decedents; a proportion of about 102 males to every 100 females.

Parentage.—Of the 406 decedents from diseases of the heart, in 1887, there were 240 of American parentage, and 166 of foreign, a proportion of 144 of American parentage to every 100 of foreign. This is in accordance with the invariable rule of the whole period of registration.

The following Table exhibits for each of the last twenty-three years, 1865 to 1887, inclusive, the number and percentage, and the sex and parentage of the decedents from diseases of the heart, and the number of the same in each division of the State:

TABLE LXIX.

YEARS.	DISEASES OF THE HEART.											
			SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
	Whole Number.	Per cent.	Males.	Females.	American.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County Towns.*	Providence City.	Washington County.
1865	98	2.88	51	47	65	33	6	5	8	27	47	5
1866	115	3.87	58	57	90	25	7	8	10	41	40	9
1867	114	3.94	67	47	81	33	4	9	7	37	49	8
1868	116	3.96	58	58	89	37	5	8	12	35	52	4
1869	128	3.78	75	53	79	49	2	13	11	36	62	4
1870	117	3.61	77	40	77	40	4	10	8	35	59	1
1871	144	4.30	78	66	91	53	4	7	8	42	77	6
1872	189	4.45	104	85	119	70	5	9	10	59	83	13
1873	189	4.29	83	106	122	67	4	11	14	48	101	11
1874	214	5.06	109	105	150	64	6	6	28	50	106	18
1875	186	4.31	84	102	113	73	2	13	22	49	88	12
1876	166	4.03	81	80	109	57	9	11	10	38	86	12
1877	182	4.09	94	88	110	72	3	7	9	57	93	13
1878	166	3.73	88	78	109	57	5	11	15	38	83	14
1879	202	4.78	114	88	127	75	8	20	16	38	111	9
1880	231	5.03	125	106	146	85	9	21	29	59	104	9
1881	264	5.65	131	133	154	110	9	21	24	73	121	16
1882	255	5.31	116	139	162	93	8	16	23	55	142	11
1883	325	6.20	167	158	179	146	8	27	30	70	172	18
1884	285	5.60	135	150	163	122	6	16	25	87	139	12
1885	349	6.48	162	187	198	151	13	27	25	94	159	31
1886	330	5.20	152	178	184	146	12	20	18	82	168	30
1887	406	6.40	205	201	240	166	7	21	36	123	193	26
Total, 23 years	4,771	4.56	2,419	2,352	2,927	1,844	146	317	398	1,273	2,345	292

Sex.—Of the 4,771 persons deceased from diseases of the heart, in the last twenty-three years, 2,419 were males, and 2,352 were females; or 103 males to each 100 females.

Parentage.—Of the 4,771 decedents, during twenty-three years, 2,927 were of American parentage, and 1,844 of foreign.

The proportions would, therefore, stand as follows: To every 100 of foreign parentage there were about 160 of American; or about 62 American and 38 of foreign parentage in each 100 deaths.

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* Including Pawtucket.

The following Table shows the number of decedents from diseases of the heart, in each divisional period of life, in each of the last twenty three years:

TABLE LXX.

YEARS.	Under 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Not stated.
1865	14	4	6	7	22	17	19	9	......
1866	18	8	14	17	10	23	21	4	......
1867	11	11	10	13	22	16	27	4	......
1868	15	5	13	11	14	28	25	5	......
1869	21	4	14	18	20	22	21	7	1
1870	19	6	11	13	20	21	23	3	1
1871	9	12	10	19	23	36	28	6	1
1872	27	12	22	19	31	36	29	13	......
1873	19	11	28	18	25	35	42	9	2
1874	20	16	26	21	27	50	40	12	2
1875	14	16	25	20	32	29	41	9	......
1876	14	10	15	19	20	38	39	10	1
1877	15	11	20	18	27	45	33	13	......
1878	16	8	18	16	26	36	35	11	......
1879	19	9	13	25	33	51	36	16	......
1880	15	10	18	23	38	49	49	28	1
1881	32	13	26	23	37	49	53	21	......
1882	22	17	24	25	36	51	61	17	2
1883	39	13	21	33	52	65	76	26	......
1884	15	25	21	32	45	61	50	32	4
1885	38	13	24	42	61	69	78	24	......
1886	39	18	28	38	52	68	69	18	......
1887	52	30	23	35	61	79	87	39	......
Total	503	282	430	515	734	974	982	336	15

The unusual proportion of about one-eighth under 20 years of age will be noticed.

The results of twenty-three years of registration, with record of ages of decedents from diseases of the heart, show in periods of twenty years each of life, the following percentages:

Under 20 years of age	10.5 per cent.
Between 20 and 40	15.0 per cent.
Between 40 and 60	26.2 per cent.
Between 60 and 80	40.8 per cent.
Over 80	7.5 per cent.
	100.0 per cent.

It will be seen that about 41 per cent. of all the deaths from diseases of the heart were of persons over sixty years of age, and under eighty.

Diseases of the heart have acquired large importance as a cause of death. From 28.8 in every 1,000 deaths from all causes, in 1865, heart diseases have gradually increased to 64 in every 1,000, in 1887.

PNEUMONIA.

There were 488 decedents from pneumonia, in 1887. The number is 7 more than in 1886, but the percentage to whole number of deaths is slightly smaller.

The proportion to whole number of deaths was 7.7 per hundred. In 1885 it was 8.6 in every 100; and in 1886 was 8.2 in every 100.

Sex.—Of the 488 decedents from pneumonia, and including congestion of the lungs, 260 were males and 228 were females; or 114.2 males to each 100 females.

Parentage.—By parentage there were 227 of American and 261 of foreign parentage. The proportion of decedents from pneumonia was about 87 of American to each 100 of foreign parentage.

Season.—There were 273, or over one-half, of the deaths that occurred during the first four months of the year. The largest mortality by months was 90 in March, and 67 in April.

The following Table shows, for each of the last twenty-three years, the number and the percentage, with the sex and the parentage of the decedents from pneumonia; and the number in each year, in each division of the State:

TABLE LXXI.

YEARS.	PNEUMONIA.											
			SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
	Whole Number.	Per cent.	Males.	Females.	American.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County Towns.*	Providence City.	Washington County.
1865............	175	5.1	80	95	110	65	8	11	21	49	74	12
1866............	193	6.5	94	99	127	66	13	17	13	59	81	10
1867............	172	5.9	68	104	103	69	8	12	12	56	68	16
1868............	191	6.6	99	92	120	71	9	5	16	54	92	15
1869...........	190	5.6	104	86	110	80	7	10	10	63	88	12
1870............	182	5.6	102	80	96	86	6	12	15	55	78	16
1871............	218	6.5	104	114	129	89	12	21	11	68	85	21
1872............	229	5.4	119	110	125	104	11	1	9	74	120	14
1873............	234	5.3	127	107	143	91	11	9	10	65	123	16
1874............	250	5.9	118	132	143	107	6	13	7	73	136	15
1875............	400	9.3	199	201	243	157	14	27	25	105	198	31
1876...........	339	8.2	164	175	162	177	13	23	16	97	163	27
1877............	226	5.1	104	122	127	99	10	7	14	81	98	16
1878............	317	7.1	143	174	176	141	10	11	18	110	140	28
1879............	311	7.4	148	163	163	148	7	15	15	103	156	15
1880............	364	7.9	180	184	177	187	26	16	18	92	192	20
1881............	327	6.5	177	150	190	137	10	23	17	81	174	22
1882............	344	7.2	178	166	163	181	10	22	24	91	176	21
1883............	400	7.8	192	208	198	202	19	21	34	108	204	14
1884............	363	7.1	167	196	192	171	10	13	17	125	172	26
1885............	465	8.6	214	251	271	194	15	20	33	151	227	19
1886............	481	8.2	232	249	234	247	17	29	37	161	209	28
1887............	488	7.7	260	228	227	261	13	27	39	142	227	40
Total, 23 years..	6,859	6.9	3,373	3,486	3,729	3,130	265	365	431	2,063	3,281	454

Sex.—Of the 6,859 decedents from pneumonia, in twenty-three years, 1865 to 1887, inclusive, 3,373 were males and 3,486 were females; a proportion of 103.3 females to every 100 males.

Parentage.—In relation to parentage, there were of the 6,859 decedents, 3,729 of American and 3,130 of foreign; or 119 of American parentage to every 100 of foreign.

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* Including Pawtucket.

TABLE LXXII.

Exhibiting the Number of Decedents from Pneumonia, in each of the several periods of life, during each of the last twenty-three years, from 1865 to 1887, inclusive.

YEARS.	Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 & over.	Not stated.
1865	65	4	2	....	14	11	15	17	21	21	5	....
1866	57	4	4	5	12	10	14	21	25	32	9	....
1867	57	9	2	3	10	11	13	16	25	13	12	1
1868	70	4	3	3	15	8	16	13	19	27	13	....
1869	64	11	1	2	11	12	9	28	25	16	11	....
1870	84	6	5	4	6	7	8	14	20	19	8	1
1871	71	7	2	7	10	17	16	16	35	17	19	1
1872	83	5	1	7	17	20	19	22	24	19	11	1
1873	105	4	8	3	10	14	16	17	24	23	10	....
1874	76	9	4	6	17	17	25	21	40	27	8	....
1875	120	9	3	8	22	30	35	39	61	43	28	2
1876	116	5	4	3	20	20	32	35	48	39	17	....
1877	79	2	....	7	15	15	24	27	22	24	9	2
1878	115	9	4	10	14	17	28	20	42	45	13	....
1879	102	8	1	3	14	27	26	35	38	38	9	....
1880	95	18	3	16	14	33	37	46	47	43	12	....
1881	102	4	2	5	15	22	26	45	48	31	26	1
1882	71	3	4	14	22	36	49	33	41	46	21	4
1883	88	15	2	13	32	33	40	53	49	46	27	2
1884	103	14	5	11	23	34	24	32	53	37	23	4
1885	121	9	10	8	23	29	50	49	76	59	29	2
1886	111	10	7	19	32	35	50	58	74	55	30	....
1887	132	15	7	7	32	43	51	56	64	53	28	....
Totals	2,087	184	84	164	404	501	623	713	921	773	388	21

Age.—Of the 6,859 decedents from pneumonia, during the period of twenty-three years, 2,087, or nearly one third, were under five years of age. During the periods of life of over fifty years of age the number of decedents was 2,795, or about 40 per cent. of the whole number.

The following summary will present the percentages in round numbers:

Under five years of age	31 per cent.
Five years and under twenty	6 per cent.
Twenty years and under fifty	23 per cent.
Fifty years and over	40 per cent.

SCARLATINA.

The number of deaths returned as having been caused by scarlatina, in 1887, was 266. The number is 178 more than in 1886.

Sex.—Of the 266 decedents from scarlatina 120 were males and 146 were females, or 120 females to every 100 males.

Parentage.—There were 95 of American parentage, and 171 of foreign; or a proportion of about 180 of foreign parentage to every 100 of American.

During a period of twenty-three years there were 1,614 decedents from scarlatina of American parentage, and 1,956 decedents of foreign; or a proportion of 121 of foreign to each 100 of American parentage.

The following Table will present the statistics of scarlatina for the last thirty-three years, from 1855 to 1887, inclusive, the number and percentage and sex of the decedents from scarlatina, and the number from scarlatina in each division of the State. It also shows, from 1865 to 1887, inclusive, the parentage of the decedents from scarlatina:

TABLE LXXIII.

YEARS.	SCARLATINA.											
	Whole Number.	Per cent.	SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
			Males.	Females.	American.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County Towns.*	Providence City.	Washington County.
10 yrs., 1855-1864.	1,266	4.9	611	655	......	......	46	62	189	334	568	57
1865............	255	7.5	130	125	134	121	33	17	3	86	108	8
1866............	28	0.9	15	13	12	16	5	......	8	12	3	......
1867.	14	0.5	6	8	10	4	1	......	1	2	10	......
1868............	93	3.2	47	46	32	61	2	3	3	34	50	1
1869............	286	8.4	126	160	128	158	17	23	12	72	138	34
1870............	75	2.3	37	38	28	47	1	6	3	22	35	8
1871............	66	1.9	41	25	31	35	1	3	1	37	21	13
1872............	53	1.2	22	31	22	31	......	1	4	27	19	2
1873............	287	6.5	124	163	163	124	4	2	42	80	132	27
1874............	462	10.9	231	231	176	296	27	17	1	133	268	16
1875............	185	4.3	85	100	121	56	8	30	3	35	94	15
1876............	80	1.9	34	46	42	38	3	2	7	21	35	12
1877............	62	1.4	26	36	29	33	14	4	3	21	12	8
1878............	86	1.9	41	45	35	51	3	5	3	14	57	4
1879............	311	7.4	164	147	130	181	3	6	4	37	255	6
1880............	468	10.0	215	253	216	252	22	30	11	143	243	19
1881............	138	3.0	79	59	62	76	11	25	12	41	45	4
1882............	45	0.9	24	21	16	29	......	3	16	7	18	1
1883............	34	0.6	17	17	14	20	1	1	5	9	16	2
1884............	97	1.8	39	58	41	56	......	......	8	28	57	4
1885............	91	1.7	36	55	48	43	......	3	6	24	38	20
1886............	88	1.5	46	42	29	59	......	13	2	41	30	2
1887............	266	4.2	120	146	95	171	9	16	4	80	154	3
Total...........	4,836	4.9	2,316	2,810	1,614	1,956	211	262	351	1,330	2,406	256

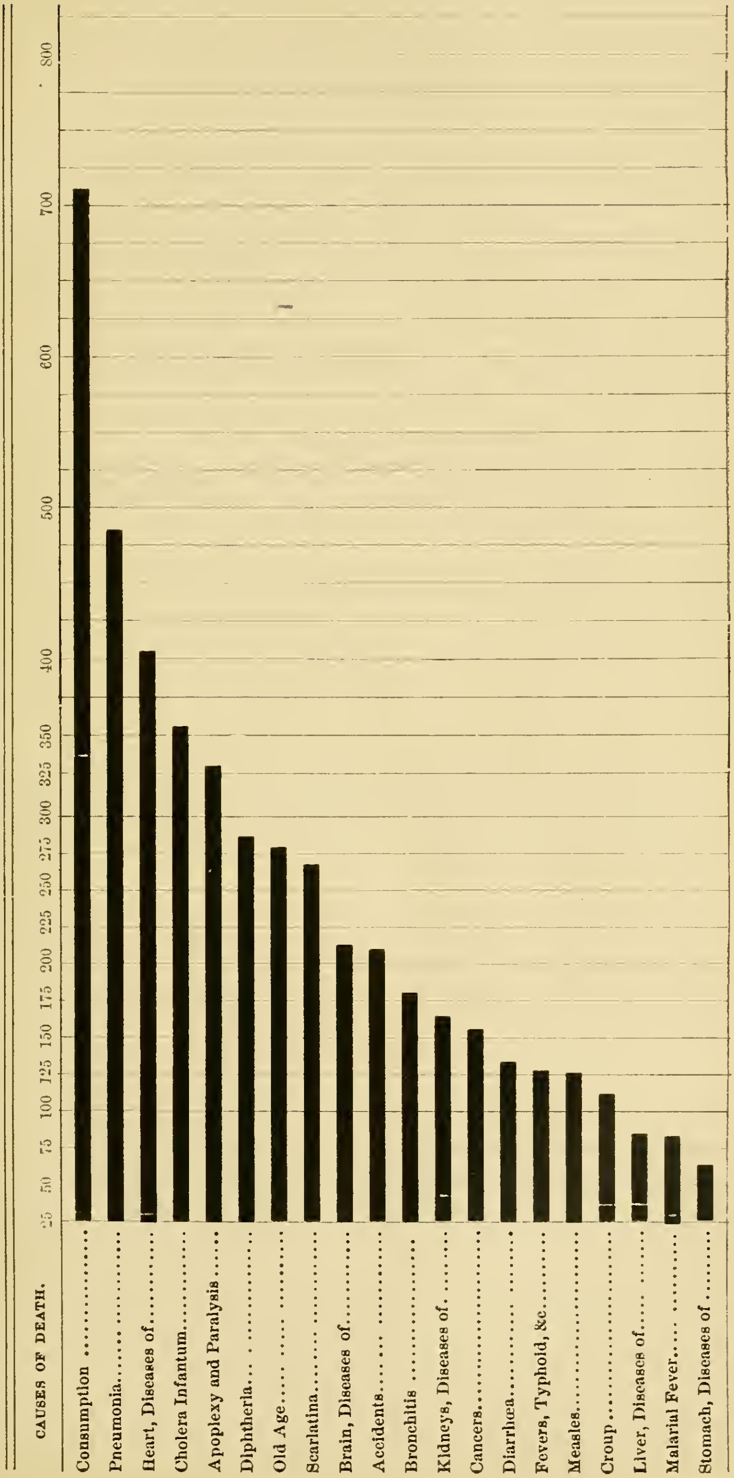
* Including city of Pawtucket.

The following Table shows the percentages comparatively of several prominent causes of death, in the aggregate of total mortality from specified causes in Rhode Island, during a period of eleven years, from 1876 to 1886, inclusive:

TABLE LXXIV.

CAUSES OF DEATH.	YEARS.										
	1886.	1885.	1884.	1883.	1882.	1881.	1880.	1879.	1878.	1877.	1876.
Accidents (all kinds)...	3.22	3.09	3.80	2.84	3.44	3.04	3.51	2.43	2.89	3.10	2.94
Apoplexy and Paralysis .	5.69	5.38	5.78	5.39	5.52	5.23	4.67	5.21	4.45	4.25	4.22
Brain, Diseases of	3.11	3.61	2.97	3.50	3.60	3.84	3.44	3.73	3.28	3.68	3.75
Bronchitis	2.96	3.09	2.29	2.04	2.08	1.80	1.98	1.47	1.89	1.62	1.46
Cancer.................	2.77	3.59	3.03	3.30	2.75	3.11	2.72	2.96	2.82	3.17	2.72
Cholera Infantum.......	6.27	5.16	6.31	4.73	6.77	5.15	5.43	3.81	3.97	6.08	6.41
Consumption............	14.12	14.45	14.34	15.01	15,33	15.12	14.02	15.09	15.98	15.52	16.78
Convulsions	2.06	2.06	2.70	2.47	2.29	2.18	2.88	2.47	2.65	1.95	2.28
Croup..................	1.55	1.74	1.55	1.40	1.60	2.16	1.45	2.28	2.20	2.23	2.61
Debility...............	2.91	2.45	2.87	1.14	2.69	2.61	3.09	2.35	1.91	2.65	2.80
Diarrhœa	1.59	1.55	2.20	2.55	1.87	1.65	1.52	1.26	1.25	2.11	1.87
Diphtheria.............	3.90	1.83	2.31	1.88	2.10	4.63	3.40	6.14	10.28	11.56	4.07
Dysentery..............	1.13	.68	.78	1.06	1.42	.90	.61	1.04	.95	1.22	1.28
Fevers.................	2.87	2.93	3.24	5.12	4.60	3.05	3.37	2.70	3.94	3.55	3.69
Heart, Diseases of.......	6.20	6.48	5.60	6.35	5.31	5.68	5.03	4.78	3.92	4.28	4.25
Hooping Cough..........	.83	.79	.83	.17	1.48	1.46	.44	1.02	1.28	.75	1.23
Hydrocephalus..........	.41	.31	.81	.87	1.02	1.20	1.01	1.36	1.65	1.29	1.74
Kidneys, Diseases of ...	2.64	3.14	2.52	2.43	1.79	1.69	2.02	1.88	1.89	1.57	1.28
Liver, Diseases of.......	1.08	.87	.88	.83	1.21	.82	1.20	1.17	1.06	1.06	1.13
Marasmus...............	.22	2 15	1.62	2.02	1.62	1.11	1.27	1.16	1.30	.99	1.13
Old Age,...............	4.69	4.95	5.68	5.22	5.89	5.29	5.95	5.22	5.25	5.00	6.18
Pneumonia.............	8.18	8.65	7.14	7.84	7.16	7.01	7.90	7.37	7.49	5.31	8.69
Scarlatina..............	1.50	1.70	1.88	.64	.94	2.96	9.99	7.37	2.03	1.46	2.05

Diagram III. Exhibiting the comparative mortality by absolute number of decedents, from twenty principal causes of death in Rhode Island, in 1887.



NOMENCLATURE OF DISEASES,

OR

CAUSES OF DEATH.

NAMES OF CAUSES OF DEATH.

It should be stated that the nomenclature of diseases in the nosological arrangement on the following pages is not intended to include the names of the whole list of morbid phenomena affecting the human organism, but the names of such only as are directly the **cause of death,** or such as ordinarily predispose to or set in motion the morbid processes that end in death.

In the construction of the classification now adopted, use has been made of the results and conclusions of a committee of the Royal College of Physicians of England, and from such other sources as were accessible, and from examination of the classifications in use in different countries in Europe and America. It has been the design to have all these classifications based on observed facts and most advanced conclusions in relation to pathological processes and morbid conditions, inductive, causative, progressive and ultimate.

The statistical nosology will consist of two lists of causes of death,

A TABULAR LIST AND SUPPLEMENTAL LIST.

The Tabular List comprises the chief or primary causes of death which will be used in Table IX on Classification and Percentage in the preparation of the Registrar's Annual Reports, and will, therefore, include all those named in the Supplemental List, when the final arrangement is completed.

The Supplemental List is subordinate to the Tabular List, and contains synonyms, or names of related diseases, which may be actually, or are supposed to be, causes of death, and which are in addition to those in the Tabular List, and which are often found in Physician's **certificates of death,** as reported to the State Registrar. These will have a place, in alphabetical order, in Tables VII and VIII of the reports, and will be variously grouped under different heads in Table IX, as the figure which precedes each cause in the Supplemental List will correspond with the figure of the head, in the Tabular List, under which that cause is placed.

NOMENCLATURE OF CAUSES OF DEATH.

CLASSES.

I.	General Diseases.—A.	SPECIFIC AND FEBRILE.	(*Zymotic.*)
II.	General Diseases.—B.	CACHECTIC.	(*Constitutional.*)
III.	Special Diseases.—A.	FUNCTIONAL OR ORGANIC.	(*Local.*)
IV.	Special Diseases.—B.	DEVELOPMENTAL.	(*Developmental.*)
V.	Violent Deaths. —	FROM INJURIES.	(*Violence.*)

SUB GROUPS OR ORDERS.

CLASS I.—Zymotic Diseases.

Order one, Miasmatic. Order two, Enthetic. Order three, Dietic. Order four, Parasitic.

CLASS II.—Constitutional Diseases.

Order one, Diathetic. Order two, Tubercular.

CLASS III.—Local Diseases.

Order one, Diseases of the Nervous System. Order two, Organs of Circulation. Order three, Organs of Respiration. Order four, Organs of Digestion. Order five, Urinary Organs. Order six, Reproductive Organs. Order seven, Osseous and Locomotory Organs. Order eight, Integumentary System.

CLASS IV.—Developmental Diseases.

Order one, Of Children. Order two, Of Women. Order three, Of Old Age. Order four, Of Nutrition.

CLASS V.—Violent Deaths.

Order one, Accidents and Negligence. Order two, Homicide. Order three, Suicide.

STATISTICAL NOSOLOGY.

CLASS I.—Zymotic Diseases.

TABULAR LIST.

For Table IX of the Registration Report.

ORDER One.—Miasmatic.

I. One.—1. Carbuncle
2. Cholera, Asiatic
3. Cholera, Sporadic
4. Cholera Infantum
5. Cholera Morbus
6. Croup (Pseudo Membranous)
7. Diphtheria
8. Diarrhœa
9. Dysentery
10. Erysipelas
11. Fever, Bilious
12. Fever, Cerebro Spinal
13. Fever, Intermittent
14. Fever, Malarial
15. Fever, Typhoid
16. Fever, Typho-Malarial
17. Fever, Unspecified
18. Fever, Yellow
19. Influenza (Epidemic)
20. Measles
21. Mumps
22. Metria (Puerperal Fever)
23. Pertussis
24. Tonsillitis
25. Scarlatina
26. Small Pox
27. Varicella

ORDER Two.—Enthetic.

I. Two.—1. Glanders
2. Gonorrhœa
3. Hydrophobia
4. Malignant Pustule
5. Septicæmia
6. Syphilis

ORDER Three.—Dietic.

I. Three.—1. Alcoholism
2. Delirium Tremens
3. Inanition
4. Purpura and Scurvy

ORDER Four.—Parasitic.

I. Four.—1. Apthæ
2. Worms
3. Other Parasites

SUPPLEMENTAL LIST.

Synonyms or Related Diseases.

ORDER One.—Miasmatic.

1. One.—1. Anthrax.
Gangrenous Boil.
4. Entero Colitis, } Infantile.
Gastro Enteritis, }
10. Hospital Gangrene.
Pyemia.
Phagadena.
Phlegmon.
15. Infantile Fever.
Typhus Fever.
20. Rotheln.
21. Parotitis.
22. Child-bed Fever
23. Hooping Cough.
24. Quinsy.
25. Scarlet Fever.
Angina Maligna.
26. Varioloid.
27. Chicken Pox.
Miliaria.

ORDER Two.—Enthetic.

I. Two.—2. Stricture of the Urethra.
Gonorrheal Opthalmia.
5. Necusia.

ORDER Three.—Dietic.

I. Three.—1. Intemperance.
3. Privation.
Starvation.
Neglect.

ORDER Four.—Parasitic.

I. Four—1. Thrush.
2. Tape Worm.
Trichianasis.
3. Scabies.
Hydatids.
Porrigo, Favus, etc.

CAUSES OF DEATH.

CLASS II.—Constitutional Diseases.

TABULAR LIST.	SUPPLEMENTAL LIST.
ORDER One.—Diathetic. II. One.—1. Gout 2. Dropsy 3. Anæmia 4. Cancer, Various 5. Cancer of Breast 6. Cancer of Stomach 7. Cancer of Uterus 8. Noma (Canker) 9. Mortification 10. Rheumatism	II. One.—2. Anasarca. 3. Leucocythæmia. Chlorosis. 4. Soft Cancer. Epithelioma. Melanosis. Lupus. Other kinds of Cancer. 9. Bed Sore. Dry Gangrene. 10. Rheumatic Carditis. Rheumatic Synovitis. Rheumatic Meningitis.
ORDER Two.—Tubercular. II. Two.—1. Scrofula 2. Tabes Mesenterica 3 Phthisis (Pulmonary) 4. Hydrocephalus 5. Tubercular Meningitis	II. Two.—1. Psoas (Lumbar) Abscess. White Swelling. Cretinism (Goitre). Adenitis. Morbus Coxarius. Pott's Disease. 2. Tubercular Peritonitis. 3. Hæmoptysis.

CLASS III.—Local Diseases.

ORDER One.—Nervous System. III. One.—1. Cephalitis 2. Cerebritis 3. Apoplexy 4. Paralysis 5. Insanity 6. Chorea 7. Epilepsy 8. Tetanus 9. Convulsions 10. *Brain Diseases**	III. One.—1. Phrenitis. Meningitis. Cerebro Spinal Meningitis. (Sporadic.) 5. Monomania. Fright. Grief. Melancholia. Dementia. Rage. 6. Hysteria. 8. Laryngismus. Lockjaw. Trismus Nascentium. 10. Neuralgia, Cerebral. Neurasthenia. Disease of Spinal Cord. Necrencephalus (Ramollissement).
ORDER Two.—Circulatory System. III. Two.—1. Pericarditis 2. Aneurism 3. *Heart Diseases**	III. Two.—1. Carditis. Endocarditis. 3. Hypertrophia. Atrophia. Angina Pectoris. Syncope. Arteritis. Ossification of Arteries. Phlebitis. Hydropericardium. Embolus. Thrombosis.

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* Not otherwise placed.

STATISTICAL NOSOLOGY.

CLASS III.—Local Diseases.—Continued.

TABULAR LIST.	SUPPLEMENTAL LIST.
ORDER Three.—Respiratory System. III. Three.—1. Epistaxis 2. Laryngitis 3. Bronchitis, Acute 4. Bronchitis, Chronic 5. Pleurisy 6. Pneumonia 7. Asthma 8. *Lung Diseases**	III. Three.—2. Œdema Glottidis. 5. Empyema. Diaphragmitis. Pneumothorax. Hydrothorax. 6. Pulmonary Apoplexy. Hæmoptysis.† Congestion of Lungs. 7. Grinders' Asthma. Miners' Asthma. Emphysema.
ORDER Four.—Digestive System. III. Four.—1. Gastritis 2. Enteritis 3. Peritonitis 4. Ascites 5. Ulceration of Intestines 6. Hernia 7. Ileus 8. Intussusception 9. Stricture of Intestines 10. Fistula 11. *Stomach Diseases** 12. *Pancreas Diseases** 13. Hepatitis 14. Jaundice 15. *Liver Diseases** 16. *Spleen Diseases** 17. *Bowel Diseases**	III. Four—1. Glossitis. Stomatitis. Pharyngitis. Œsophagitis. 2. Gastro Enteritis, } Not Infantile. Entero Colitis. 5. Perforation of— 6. Congenital. Femoral. Inguinal. Scrotal. Umbilical. Ventral. 7. Constipation. Obstipation. Perityphlitis. Typhlitis. 9. Strict. Œsophagus. 11. Dyspepsia. Pyrosis. Gastralgia. Hæmatemesis. Melæna. 14. Gall-stones. 15. Cirrhosis.
ORDER Five.—Urinary System. III. Five.—1. Nephritis 2. Ischuria 3. Nephria (Bright's Disease) 4. Diabetes 5. Calculus (Gravel, &c.) 6. Cystitis. 7. Prostate, Disease of 8. *Kidney Diseases** 9. Bladder, Diseases of 10. Testicles, Disease of	III. Five.—3. Albuminuria. 6. Cystirrhœa. 8. Diuresis. Hæmaturia. Uræmia. 9. Urethritis. 10. Orchitis.
ORDER Six.—Generative System. FEMALE. III. Six.—1. Ovarian Dropsy 2. *Diseases of Uterus**	III. Six.—1. Ovarian Tumor. 2. Hysteritis, Metritis. Uterine Ulcer. Polypus, Tumor. Ovaritis. Pelvic Cellulitis.

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* Not otherwise placed.

† See Class II, Order Two—3, Sup. List.

CAUSES OF DEATH.

CLASS III.—Local Diseases.—Continued.

TABULAR LIST.	SUPPLEMENTAL LIST.
ORDER Seven.—Osseous and Locomotory System.	
III. Seven.—1. Bones, Diseases of	III. Seven.—1. Ostitis. Periostitis. Fragilitas Ossium. Mollities Ossium. Rickets. Caries. Necrosis. Exostosis.
2. *Joint Diseases**	2. Synovitis. Hip Diseases.
3. Vertebræ, Diseases of	3. Spine Diseases. Spine, Caries and Necrosis.
ORDER Eight.—Integumentary System.	
III. Eight.—1. Phlegmon‡	III. Eight.—1. Abscess, part not stated. Boil. Whitlow.
2. Ulcer	
3. *Skin Diseases*	3. Roseola. Urticaria. Eczema. Herpes. Pemphigus. Ecthyma. Impetigo. Psoriasis, &c. Dermatitis (from burns, &c.).
ORDER Nine.—Organs of Special Sense.	
EYE AND EAR.	
III. Nine.—1. Malignus Oculi	
2. Opthalmitis	
3. Ossis Petrosis	
4. Otitis	

CLASS IV.—Developmental Diseases.

ORDER One.—Developmental Diseases of Children.	
IV. One.—1. Still born	
2. Debility, Infantile	IV. One.—2. Asthenia.
3. Debility, Premature Birth	
4. Cyanosis	4. Atelectasis Pulmonum.
5. Spina Bifida	
6. Other Malformations	6. Anus Imperforatus. Cleft Palate. Idiocy.
7. Teething	
8. Innutrition	8. Malnutrition.

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* Not otherwise placed. † See Class II, Order Two—1, Sup. ‡ See Class I, Order one—10, Sup.

STATISTICAL NOSOLOGY.

CLASS IV.—Developmental Diseases.—Continued.

TABULAR LIST.	SUPPLEMENTAL LIST.
ORDER Two.—Developmental Diseases of Women.	
IV. Two.—1. Paramenia	IV. Two.—1. Amenorrhœa. Chlorosis.† Climacteria. Menorrhagia.
2. Childbirth*	2. Miscarriage. Abortion. Puerperal Mania. Puerperal Convulsions. Phlegmasia Dolens. Cæsarian Operation. Extra-Uterine Fœtation. Flooding. Retention of Placenta. Presentation of Placenta. Deformed Pelvis. Mammary Abscess.
ORDER Three.—Developmental Diseases of Old People.	
IV. Three.—1. Old Age	
ORDER Four.—Diseases of Nutrition. Adolescent and Adult.	
IV. Four.—1. Atrophy	IV. Four.—1. Marasmus. Malnutrition.
2. Debility	2. Asthenia. Exhaustion.

CLASS V.—Violent Deaths.

TABULAR LIST.	SUPPLEMENTAL LIST.
ORDER One.—Accident or Negligence.	
V. One.—1. Fractures and Contusions	V. One.—1. Railroad and other Accidents.
2. Wounds, Unspecified	
3 Burns and Scalds	
4. Poison	
5. Drowning	5. Lost at Sea.
6. Suffocation	6. Asphyxia. Strangulation.
7. Various	7. Exposure. Cold Water. Frozen. Heat. Lightning. Surgical Operation.
ORDER Two.—Homicide.	V. Two.—1. Infanticide. Patricide. Matricide. Fratricide. Filicide, &c.
ORDER Three.—Suicide.	
V. Three.—1. Wounds, Unspecified Wounds, Pistol or Gunshot Wounds, Knife	
2. Poison	
3. Drowning	
4. Hanging	
5. Otherwise	

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* See Class I, Order One—22, Tab. List.

† See Class II, Order One—3, Sup.

Suggestions concerning physicians' certificates of death. It should be the endeavor to specify the causes of death as definitely and correctly as possible. It is not unusual to find a return of death with the physician's certificate naming the cause of death “Paralysis,” “Paraplegia,” “Fits,” “Convulsions,” “Dropsy,” &c., which are merely secondary or consecutive causes, simply symptoms only, or results of some organic lesion or pathological derangement. Sometimes **the alleged cause** is really the *final cause,* as in a case of termination of life by paralysis, but the cause given as paralysis **is not the determining cause.** Apoplexy, or some lesion of the nervous centres, must be the original and determining cause of paralysis, paraplegia, hemiplegia, &c., and the determining cause should be stated as the primary in the return or certificate.

Convulsions are the symptoms or results of some antecedent or concurrent disease. They follow meningitis and other structural lesions of the nervous centres: they also occur from reflex derangement or disturbance of the nervous centres, as in children, from intestinal irritation, or from inflammation, as in gastritis, enteritis, nephritis, &c. In such cases they may be contributory to death, and perhaps, in rare instances, a final cause, by inducing or taking the form of tonic or tetanic spasm. But as contributory, or as a final cause, they are simply concomitant. They should find place as secondary causes only in certificates of death.

“Fits” is too unmeaning a term to be used in any case. The word in a medical sense literally means an attack, an occurrence, or succession of attacks of some physical or mental disturbance, as “fits of sickness,” “fits of melancholy,” &c., and is not properly used as synonymous with convulsions from any cause. It would be just as sensible to attribute a death to an “occurrence” or an “attack” as a cause, as to “fits,” without other qualifications.

“Dropsy” and “Ascites” have been allowed to stand as determining causes of death because of extended use, and because of the obscurity with which their causes in rare instances are involved. We can scarcely conceive of a dropsical accumulation without antecedent organic or functional disorder, derangement of the absorbent or secretory system, or depravation of the blood. They are left in the tabular list with not a little reluctance. Paralysis is also left in the tabular list for a like reason, and with the same doubt of propriety.

It may be suggested that it is sometimes difficult, and occasionally impossible, to ascertain positively the chief or leading cause of death. The physician last in attendance may find several functional or structural diseases, the morbid conditions multiple and complex, and not only the initial derangement, but the succession of morbid processes, proximate, consecutive and ultimate, inextricably entangled and lost to discovery.

The careful diagnostician will, however, even then be able to *conceive the probable leading cause*, but, whether or not, he will be able at least **to ascertain the most prominent and controlling lesion or functional derangement then existing,** and which may reasonably be accepted as the primary cause of death.

The preceding remark applies very properly to cases of adventitious diseases which prove fatal, when occurring in individuals already suffering from some chronic disease of slower progress, as when fatal dysentery attacks a consumptive person, or one having chronic nephritis dies from pneumonia. **The acute disease** occurring independently of the chronic disease **is the chief cause of death,** although the fatal event may have been made more sure by the existence of the antecedent disease, and although the antecedent disease would have ultimately caused death.

In attributing death to scrofula, tuberculosis, tumor, cancer and other generic terms, as causes, **the organic structure or locality where the disease is developed** should always be given, otherwise such terms are very indefinite, and discredit the acquirements of the certifying physician.

The objects desired in presenting the preceding nomenclature of causes of death, and the suggestions following, are to subserve the purpose of greater uniformity in the use of nosological terms, and to promote the accomplishment of entire definiteness, accuracy, and completeness in the physicians' certificates of causes of death.

The State of Rhode Island has a leading reputation for the completeness of its vital statistics. It is not excelled by any State in the Union. With the exception of two or three, there are no States that have approximate completeness of numbers of decedents, and fullness of statements of fact connected therewith. It is hoped that the physicians of Rhode Island will feel a professional and patriotic interest in the further elevation of the reputation of the State as a collector of accurate and complete vital statistics.

THE LAWS OF RHODE ISLAND

IN RELATION TO THE REGISTRATION OF

BIRTHS, MARRIAGES AND DEATHS,

AND OF DIVORCE.

PUBLIC STATUTES, CHAPTER 85.

OF THE REGISTRATION OF BIRTHS, DEATHS AND MARRIAGES.

SECTION 1. The town clerks of the several towns, or any person whom the board of aldermen of any city, or the town council of any town may appoint for that purpose, shall obtain, chronologically record and index, as required by the forms prescribed by section three of this chapter, all information concerning births, marriages and deaths occurring among the inhabitants of their respective towns; and on or before the first Monday in March, annually, shall make duly certified returns thereof to the secretary of the state board of health for the year ending on the thirty-first day of December next preceding, accompanying the same with a list of the persons required by law to make returns to them, who have neglected to do so, and with such remarks relating to the object of this chapter as they may deem important to communicate.

SEC. 2. The secretary of the state board of health shall receive the returns made in pursuance of the preceding section, and annually make a general abstract and report thereof, in form as prescribed by section three of this chapter, and publish not exceeding one thousand copies thereof, and for preparing, tabulating and publishing said annual report the sum of five hundred dollars shall be paid to the state registrar. Said returns, after such report is prepared, shall be deposited in the office of the secretary of state, who shall cause the same to be arranged, full alphabetical indices of all the names to be made, and the whole to be bound in volumes of convenient size and carefully preserved in his office.

SEC. 3. The blank forms required to carry out the provisions of this chapter shall, on application, be furnished by the secretary of the state board of health to clergymen, physicians, undertakers, town clerks, clerks of meetings of the

Society of Friends, and other persons requiring them, substantially as follows: The record of a birth shall state the date and place of birth, name and sex of the child, whether born alive or still-born, the name and surname, color, occupation, residence and birthplace of the parents, and the time of recording, so far as the same can be ascertained. The record of a marriage shall state the date of the marriage, place, name, residence and official station of the person by whom married, names and surnames of the parties, age, color, occupation and residence of each, condition, that is whether single, widowed or divorced, what marriage, that is whether first, second, third or other marriage, the occupation, birthplace and name of their parents, and the time of recording, so far as the same can be ascertained. The record of deaths shall state the date of death, name and surname of the deceased, the sex, color and condition, whether single or married, age, occupation, place of death, place of birth, names and birthplace of parents, disease or cause of death, and the time of recording, so far as can be ascertained.

SEC. 4. Every meeting of the Society of Friends, clergyman, and all others authorized to join persons in marriage, shall make a faithful record of every such rite performed by them, in manner and form aforesaid, and return the same for the last preceding month, on or before the second Monday of every month, to the town clerk of the town in which such rite shall have been performed; and no marriage shall be solemnized until the parties shall have signed and delivered to the person about to solemnize it, or to the clerk of a meeting of the Society of Friends, a certificate containing the information required for the record of a marriage, as prescribed by this chapter.

SEC. 5. The town clerk of every town shall annually, in the month of January, collect the information required by this chapter, in relation to all children born in the town during the year ending on the thirty-first day of December next preceding.

SEC. 6. Whenever any person shall die, or any still born child shall be brought forth in this state, the physician attending at such bringing forth or last sickness, if any physician so attended, shall, within forty-eight hours after such death or bringing forth, leave with the family, if any, or person having the care of the deceased, or the person bringing forth such still-born child, or give to the undertaker or person who conducts the funeral a certificate stating, in case of a death, the name of the deceased, the date of the death, and the disease or cause of the death, and in case of the bringing forth of a still-born child, the date and the cause of such child being brought forth still-born.

SEC. 7. Every town council may appoint a sufficient number of persons to act as undertakers, removable at the pleasure of such council.

SEC. 8. No undertaker or other person shall conduct a funeral, or bury or deposit in a tomb, or remove from this state, or otherwise dispose of the remains of any deceased person or still-born child unless he shall first obtain the physician's certificate required by section six of this chapter, if a physician was in attendance upon such person who has deceased, or the person bringing forth such still-born child, and shall return the same, together with his own certificate of the information required by section three of this chapter, to the town clerk of the town where such death or bringing forth took place.

SEC. 9. Any town may make ordinances more effectually to attain the objects herein contemplated.

SEC. 10. The town clerks, or persons appointed as aforesaid, shall receive for each record of a death made and returned as required by law, and for each record of a marriage made and returned as required by law, twenty cents, to be paid to them out of their respective town treasuries: *Provided*, that the yearly compensation to be paid out of the town treasury as aforesaid, to any one town clerk or person appointed as aforesaid, who shall perform the duties prescribed by this chapter shall not be less than five dollars. Undertakers and others making returns of death as required by section eight of this chapter, shall receive for each full report of a death made to the town clerk, five cents in the cities of Providence and Newport, and ten cents in the other towns of the state.

SEC. 11. Every clergyman, physician, undertaker, town clerk, clerk of any meeting of the Society of Friends, or other person who shall wilfully neglect or refuse to perform any of the duties imposed on or required of him by this chapter, shall be fined not exceeding twenty dollars for each offence, one half thereof to the use of the town in which the offence shall occur, and one-half thereof to the use of the person who shall complain of the same.

SEC. 12. Every clergyman, physician, coroner, undertaker, or clerk of any meeting of the Society of Friends, shall cause his name and residence to be recorded in the town clerk's office of the town where he resides.

SEC. 13. No letters of administration or letters testamentary shall be granted by any court of probate, upon the estate of any person, until the death of such person, or the facts from which the same is presumed, shall be duly certified, as near as may be, to the town clerk, in order that the same may be duly registered according to the provisions of this chapter.

SEC. 14. The town clerks of the several towns, the city clerk of the city of Newport, and the city registrar of the city of Providence, shall have the custody of all records of births, deaths and marriages of their respective towns, whether made under the statutes now in force or any former statute, and a certificate signed by them, certifying that any written or printed statement of any marriage, birth or death is a true copy of the record in their custody, shall be admitted as evidence of such marriage, birth or death.

SEC. 15. Births, marriages and deaths of non-residents shall be distinguished from those of residents, in the returns, by being arranged separately.

SEC. 16. The secretary of the state board of health may, from time to time, vary the forms of returns, and require such additional information as he may consider necessary to accomplish the object of this chapter.

SEC. 17. The town clerks or other officers appointed under this chapter to collect, record and return the births in the several towns, shall receive fees therefor as follows: For making record and return of these facts as required by law, twenty cents each for the first fifty entries in each calender year, and ten cents each for each subsequent entry and return; to be paid by the town in which the birth is recorded.

Sec. 18. The town clerks of the several towns, or other persons appointed under this chapter to collect the births in the several towns, shall annually in the month of January, collect the facts concerning the births within their respective towns, required by this chapter; and shall, so far as practicable, at the same time collect the names of all persons liable to be enrolled in the militia, as required by title thirty-four; and the census of all persons between the ages of five and fifteen years inclusive, as provided by chapter fifty; and shall receive therefor such compensation as the town council or the board of aldermen of their respective towns or cities shall determine; *Provided*, that the city of Providence shall be exempt from so much of the provisions of this section as relates to the collection of the statistics of births.

Sec. 19. Blanks for the foregoing purposes shall be furnished, on application therefor, on or before the first day of December in the year preceding, by the state board of health for the collection of births, by the adjutant-general for the taking of the enrolled militia, and by the commissioner of public schools for the census aforesaid.

Sec. 20. The person or persons who shall discharge the duties required by section eighteen of this chapter, if other than the town clerk, shall make full return thereof to the town clerk of his or their town, on or before the tenth day of February next following.

Sec. 21. The returns required to be made by clerks of the supreme court, in relation to divorces, to the secretary of the state board of health, or a prepared abstract thereof, shall be published in the annual report on the births, marriages and deaths in the state.

SYNOPSIS OF THE LAW OF MARRIAGE.

CHAPTER 163, PUBLIC STATUTES.

Sections 1, 2 and 3 show what kindred persons cannot marry, and declare marriages within prohibited degrees null and void.

Section 4 makes an exception in favor of Jews, within the degrees of affinity or consanguinity allowed by their religion.

Section 5 declares the marriage of persons having a husband or wife living, and of idiots and of lunatics, absolutely void.

Sec. 6. "Any ordained minister or elder of any religious denomination, who shall be *domiciled* in this state, and either justice of the supreme court, may join persons in marriage in any town in the state." (It will be seen that clergymen from other states *cannot* LAWFULLY *solemnize marriages* in Rhode Island.)

Section 7 defines what shall be understood by the term "religious denomination," within the meaning of the preceding section.

Sec. 8. Wardens in the town of New Shoreham may join persons in marriage in said town.

Section 9 provides that no minister, elder, magistrate or warden shall join persons in marriage. unless such person, ***if residents of this state,*** shall first present (to the clergyman or other person officiating) a certificate properly executed and signed by the town or city clerk or city registrar of the town or city in which ***EACH of such persons shall RESPECTIVELY reside,*** and ***if not residents of this state,*** then from the town or city clerk or registrar of *the town or city in which the marriage shall be solemnized*, to the effect that the said town or city clerk or registrar has ***duly recorded the intention*** of marriage between the parties named in the certificate, the said certificate also setting forth the names and surnames of the parties, the age, color, occupation, birthplace and residence of each, whether either or both have been before married, and, if before married, whether the marriage intended is the first, second. third or other marriage, and also whether the condition of either or both persons previously married is that of a divorced person, and the names, occupation and birthplace of each of their parents; and no town or city clerk or city registrar shall issue such certificate to any minor person under guardianship, unless the consent in writing of the parent or guardian shall have been first obtained thereto; provided, however, such certificate may be issued to a female over eighteen years of age, who has no parent or guardian living in the United States. (The legal minority of both sexes terminates at the age of twenty-one.)

Section 10 provides that every Society of Friends, and *every person* authorized to join persons in marriage *shall certify* upon the certificate required in section nine of this chapter *the time when* and *the place where* the marriage shall have been solemnized by him, and SHALL *on or before the second Monday of every month*, return the certificate of every marriage solemnized by him during the last preceding month, to the *clerk or registrar* of the TOWN OR CITY *in which such rite shall have been performed.*

Section 11 forbids the solemnization of the marriage ceremony, by any person, when lawful objection is made thereto in writing, until such lawful objection be removed.

Sections 12 and 13 provide that any person who shall join persons in marriage without first receiving the certificate required in section nine of this chapter, or otherwise contrary to or in violation of chapter 163 of the Public Statutes, shall be imprisoned not exceeding six months, or fined not exceeding one thousand dollars.

SECTION 14 provides that ALL PERSONS married without duly proceding as required by chapter 163, shall be fined not exceeding fifty dollars.

SEC. 15. The solemnization of marriage shall be in the presence of two witnesses at least, besides the minister, elder, or magistrate officiating.

SECTION 16 relates to marriage among Quakers or Friends and among Jews, making them valid if in accordance with the forms, rites and ceremonies of the same respectively.

SECTION 17 provides that at least one of the parties to any marriage solemnized according to the manner and form of the Society of Friends, or rites and ceremonies of the Jewish religion shall, before the celebration thereof, sign and deliver to the town or city clerk or city registrar of the town or city in which such marriage is solemnized, the certificate required in section nine.

CHAPTER 167.

OF DIVORCE.

SECTION 1. Divorces from the bond of marriage shall be decreed in case of any marriage originally void or voidable by law, and in case either party is for crime deemed to be or treated as if civilly dead, or, from absence or other circumstances, may be presumed to be naturally dead.

SEC. 2. Divorces shall be decreed for impotency, adultery, extreme cruelty, wilful desertion for five years of either of the parties, or for such desertion for a shorter period of time in the discretion of the court, for continued drunkenness, for neglect or refusal on the part of the husband, being of sufficient ability, to provide necessaries for the subsistence of his wife; and for any other gross misbehavior and wickedness in either of the parties, repugnant to and in violation of the marriage covenant.

SEC. 3. Whenever it shall appear that the absence, adultery, cruelty, desertion or other cause of complaint, as aforesaid, was committed or occasioned by the collusion of the parties, and done and contrived with an intention to procure a divorce, in such case no divorce shall be decreed.

SEC. 4. Whenever a divorce shall be had for the causes of affinity, consanguinity, impotency, idiocy, lunacy, or crime of either of the parties, the wife shall have restored to her all her lands, tenements and hereditaments; and a judgment may be passed for a restoration to her of all or such part of the personal estate specifically, or the value thereof, which has come to the husband's hands by virtue of the marriage, as the court from the circumstances of the case shall deem equitable.

SEC. 5. Whenever the divorce shall be occasioned by adultery, or other of the causes aforesaid, done or committed on the part of the wife, the husband shall hold the personal estate not secured to her by law, forever, and her real estate not secured to her by law, during his natural life, in case they have had issue born alive of her body during the marriage, otherwise during her natural life only, if he shall survive her.

SEC. 6. The court may, in such case, allow the wife for her subsistence so much of her real and personal estate as they shall deem necessary or proper.

SEC. 7. Whenever a divorce is granted for adultery, or crime on the part of the husband, the wife shall be entitled to dower in the same manner as if he were dead, unless the court shall decree alimony, chargeable upon the estate of the husband, instead of such dower.

SEC. 8. Whenever a divorce shall be had for adultery, or for any of the causes aforesaid, done or committed on the part of the husband, the wife shall continue to hold all her property, real and personal. secured to her by law, free from any right in or control over her disposition of the same, either during her life or at her death; and, if there be no issue living, shall be restored to all other her lands, tenements and hereditaments, if any there be.

SEC. 9. In such case the wife shall also be allowed out of the real or personal estate of the husband, or out of both, such alimony as the court shall think reasonable, not exceeding the use of one moiety of his real estate, during the life of the wife, and the property of one-half of his personal estate, having regard to the personal property which came to the husband by the marriage, and his ability.

SEC. 10. If there be issue living at the time of the divorce, the court, with regard to ordering restoration to the wife of such of her lands, tenements or hereditaments, if any, as may not be secured to her by law, and in regard to the amount of alimony to be allowed to her out of the property of the husband, may do as they shall judge the circumstances of the case may require.

SEC. 11. Divorces from bed, board, and future cohabitation, until the parties be reconciled, may be granted for any of the causes for which by law a divorce from the bond of marriage may be decreed, and for such other causes as may seem to require the same.

SEC. 12. In case of such divorce, the court may assign to the petitioner a separate maintenance out of the estate or property of the husband or wife, as the case may be, in such manner, and of such amount, as they may think necessary or proper.

SEC. 13. Every petition shall be signed by the petitioner, if of sound mind and of legal age to consent to marriage, otherwise upon application to the court, and after notice to the party in whose name the petition shall be filed, the court may allow such petition to be signed by a guardian or next friend.

SEC. 14. All jurisdiction over divorce, alimony, separate maintenance, or the custody, education, and support of the children of persons divorced or petitioning for a divorce, is vested in the supreme court.

SEC. 15. Said court shall have no cognizance of or jurisdiction over any petition for the same, or either of the same, unless the petitioner shall, at the time of preferring such petition, be a domiciled inhabitant of this state, and have resided therein for the period of one year, next before the preferring of such petition.

SEC. 16. All such petitions shall be filed, heard, and tried in the county in which the petitioner shall reside.

SEC. 17. The said court may, by general rule or otherwise, prescribe the notice to be given, within or without the state, on such petitions, and may issue such process as may be necessary to carry into effect all powers conferred upon them in relation to the same.

SECTIONS 18, 19 and 20 contain provisions in relation to citations to adverse party residing without the state, or in parts unknown.

SEC. 21. Whenever any citation, issued under the provisions of this chapter, shall be served by a disinterested person, such person shall return the same, having made oath thereon of the place where, the time when, and the manner in which he shall have made service of the said citations.

SECTION 22 provides for giving and ensuring proper and sufficient notice to the adverse party.

SEC. 23. The said court is empowered to regulate the custody, and provide for the education, maintenance and support of the children of all persons by them divorced or petitioning for a divorce, and of all persons to whom a separate maintenance may be granted, or who may petition for the same; to make such allowance to the wife, out of the estate of her husband, for the purpose of enabling her to prosecute or defend against any such petition for divorce or separate maintenance, in case she has no property of her own available for such purpose, as they may think reasonable and proper; and to make all necessary orders and decrees concerning the same, and the same at any time to alter, amend and annul for sufficient cause, after notice to the parties interested therein.

SEC. 24. The said court may authorize a married woman to whom a divorce from the bond of marriage is decreed to change her name, with the same rights and liabilities as if her name had not been changed.

SEC. 25. After the filing and during the pendency of any petition under this chapter, the supreme court may, as in equity, make such interlocutory decrees, or grant such temporary injunctions as may be necessary, until a hearing can be had before the court.

CHAPTER 198.

OF DIVORCES.

SECTION 5. The clerks of the supreme court in the several counties shall make returns to the secretary of the state board of health, on or before the first day of

March, in each and every year, for the year ending on the thirty-first day of December preceding, of all the applications for divorce, showing the number, the number granted, and the causes which are given for the application, but without the names of the parties, in accordance with the blanks which shall be furnished them by the secretary of the state board of health.

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